STATE OF CALIFORNIA – THE RESOURCES AGENCY
BEFORE THE
CALIFORNIA ENERGY COMMISSION (CEC)

In the matter of,	)	
	)	Docket No. 13-IEP-1D
	)	
2013 Integrated Energy Policy	)	
Report	)	
(2013 IEPR)	)	

California Energy Commission and
California Public Utilities Commission
Joint Workshop on
Electricity Infrastructure Issues Resulting from SONGS Closure

The Harry and Yvonne Lenart Auditorium
Fowler Museum at UCLA, North Campus
308 Charles E. Young Dr. North,
Los Angeles, California

Monday, July 15, 2013

9:30 A.M.

Reported by:
Lee Miller

APPEARANCES

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Robert B. Weisenmiller, Chairperson, California Energy Commission
Michael Peevey, President, California Public Utilities Commission
Michel Florio, Commissioner, California Public Utilities Commission
Mary Nichols, Chairperson, Air Resources Board
Fran Spivy-Weber, Vice-Chair, State Water Resources Control Board
Steve Berberich, California Independent System Operator
Mohsen Nazemi, South Coast Air Quality Management District

Also Present (* Via WebEx)

Presenters

Suzanne Korosec, California Energy Commission
Michael Jaske, California Energy Commission
Noushin Ketabi, California Public Utilities Commission
Jonathan Bishop, State Water Resources Control Board
Phil Pettingill, California ISO
Mark Nelson, Southern California Edison
Will Speer, San Diego Gas & Electric Company
Mike Tollstrup, Air Resources Board
Dennis Peters, California ISO
Randy Howard, Los Angeles Department of Water and Power

Panelists

Kristin Eberhard, Natural Resources Defense Council
V. John White, Center for Energy Efficiency and Renewable Technology
Shana Lazerow, Communities for a Better Environment
Nika Rogers, Division of Ratepayer Advocates
Kevin Woodruff, Consultant for The Utility Reform Network
Jan Smutny-Jones, Independent Energy Producers Assoc.
John Geesman, Alliance for Nuclear Responsibility

APPEARANCES (CONT.)

Public Comment

Jim Avery
Ray Lutz, Citizens Oversight
Doug Devine, Eagle Crest Energy
Rochelle Becker, Ratepayer Alliance for Nuclear Responsibility
Nicole Capretz, Environmental Health Coalition
Harvey Eder, Public Solar Power Coalition
Robert Cabrales, Communities for a Better Environment
Kris Kim, Bloom Energy
Pete Hasapopoulos, Sierra Club San Diego
Nancy Rada, California Wind Energy Association
Valerie Winn, PG&E
Jeff Gates, Duke Energy
Leonard Pettis, CSU
Jay Powell, Run with the Sun
Martha Sullivan, Coalition to Decommission San Onofre
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*Barbara George, Women's Energy Matters
*Donna Gilmore
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Dalia Palacios, Sierra Club
Julia May, CBE
Jim Stewart, Sierra Club
Patricia Byrd, Environmental Health Coalition
Michael Sarmiento, Sierra Club
Jose Franco Garcia, Environmental Health Coalition
Kayla Reyes, Environmental Health Coalition
Olga Modano, Sierra Club
*Steve Zuretti, Solar Energy Industry Association

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P R O C E E D I N G S

JULY 15, 2013 9:30 A.M.

MS. KOROSEC: All right, good morning everyone. I'm Suzanne Korosec. I manage the Energy Commission's Integrated Energy Policy Report Unit. Welcome to today's Joint Energy Commission/Public Utilities Commission Workshop on Electricity Infrastructure Issues Resulting from the Closure of the San Onofre Nuclear Generating Station.

I just have a few quick housekeeping items before we begin.

Restrooms are out these main doors, through the double doors to your left, and then again to your right, follow the signs.

We plan to take lunch at noon today and we've provided a list of nearby restaurants on the table with the other handouts.

We'll also have a short break in the afternoon session. But please be aware that we need to be very strict about staying on schedule, starting promptly both after lunch and after the break.

Today's workshop is being broadcast through our WebEx conferencing system and parties should be aware that you are being recorded.

We'll post the audio recording on the Energy

Commission's website in a couple of days and the written transcript in about three weeks.

I've also been informed by the UCLA folks that University policy does not allow videotaping or filming. So, if you plan to take any pictures or video, I'm sorry, we're not going to be able to allow that today.

We do have a very full agenda today, with a lot of material to cover, so questions after each presentation will be limited to those from the dais.

If you have specific questions for presenters, please save them for the public comment period, which will be after the afternoon panel.

During the public comment period we'll take comments first from those of you here in the room, and then from the people who are participating on WebEx and, finally, from those who are phone-in only.

For those in the room, because we're expecting a large number of commenters, please fill out one of the blue comment cards that's on the table out in the lobby, with the handouts, which are available, as I said, in the lobby, with your name and affiliation, and give it to me at any point during the workshop.

Because of time constraints, we're limiting each commenter to three minutes, including questions, to make sure that everybody gets an opportunity to be heard.

We'll have a countdown clock displayed on the screen on the stage to help you gauge your time.

I encourage everyone to be brief and focus on your main points, and save you detailed comments for your written comments which are due July 29th.

I also want to remind everybody to keep your comments to today's topic, which is electricity infrastructure planning in the absence of SONGS, and not get sidetracked into other issues associated with the nuclear plants.

When I call on you to speak, please come up to one of the microphones, which will be at the front of each of the aisles here. And speak into the microphone so that our WebEx participants can hear you and so that we can get your comments captured in our transcript.

Also, when you come up to speak it's helpful if you can give me a business card, either before or after you speak, if you have one, so that we can spell your name and affiliation correctly in our transcript.

For WebEx participants, you can use the chat function to tell our WebEx coordinator, Lynette Green, if you'd like to make a comment during the public comment period. We'll either relay your comment or open your line at the appropriate time.

For the phone-in only participants, we'll open

your lines after we've taken comments from the in-person and WebEx participants.

Written comments on today's topics are due close of business July 29th.

And the notice for today's workshop, which is on the table in the lobby, with the handouts, and also posted on our website explains the process for submitting comments to the IEPR docket.

For today's agenda we'll start with an overview by the CEC and the PUC, followed by a brief presentation on the Water Board's once-through cooling policy.

We'll then hear about various analyses and efforts underway by the ISO, SCE, SDG&G and the Governor's Task Force related to SONGS retirement and replacement, and then we'll break for lunch.

After lunch we'll hear about the Assembly Bill 1318 Project on Capacity Requirements and Emission Implications, followed by a presentation on the South Coast Air Quality Management District's activities that are related to electricity infrastructure.

After a short break we'll have a panel of experts representing environmental, ratepayer protection, generating industry and environmental justice organizations who will give us their perspectives and comments on the day's presentations.

We'll then open it up for public comments. Again, we absolutely want to give everyone a chance to speak but because of the room constraints we have to be out of here no later than 5:30. So, I'll remind you to keep your oral comments as concise as possible and give us the detailed comments in writing.

With that, I'll turn it over to Commissioner McAllister.

COMMISSIONER MC ALLISTER: Hi, thank you. Thank you very much, Suzanne.

I am extremely excited to be here. I want to thank UCLA for hosting us here.

I really want to thank all of you for coming, our panelists for sure for all their hard work and preparation.

And, certainly, all of our colleagues here on the dais, I'm really excited to have a good representation. Hopefully, we'll have Chairman Nichols and Commissioner Florio here in a little bit.

But just the fact that we have the leaders of our various agencies here today really speaks volumes as to how important this topic is.

Chair Weisenmiller, of course, President Peevey, Vice-Chair Spivy-Weber, and Mr. Berberich, I think I really want to -- and also, Mr. Nazemi from South Coast.

I think the leadership of our various organizations that are involved in discussing the post-SONGS world really are all here and it really does say a lot as to how critical this topic is.

So, there is a lot of -- as Suzanne said, there's a lot of material to cover today. And I just want to -- absolutely, we're committed to public participation. I just want to gauge, if you can submit -- well, if you can -- if we can get a gauge of how many people want to speak, we can then sort of parse it out so that everybody has their chance and we can get everybody on the record. It's really critically important.

But we do have time constraints and we just want to encourage everyone to be economical with their comments.

And again, please, if someone has said something and you want to sort of get on to that same point, then fair enough to just say that, you know, I agree with so and so, and then add the points that are in addition to that that you want to get on the record.

Certainly, that's a good standard practice and it works well.

And also, of course you can work with the Commission's Public Adviser's Office to make sure that

you understand how to get access to the process and how to submit your comments, and participate fully in the process.

And Alana Mathews, our new Public Adviser, can help you do that.

With that, without further ado, I want to give the rest of the folks on the dais here an opportunity, starting with Chair Weisenmiller.

CHAIRPERSON WEISENMILLER: Good morning. Thanks everyone for being here, for participating today. And also, certainly, I want to thank all the other decision makers on the dais.

Certainly, as we move forward in dealing with the challenges of life after San Onofre we're all going to need to work together pretty closely.

I think again, as Commissioner McAllister indicated, today's a chance to give us verbal comments. Certainly in written comments later you can certainly amplify. In your written comments you can certainly respond to others from today.

Obviously, what we're looking for in the post-San Onofre world is to put together a portfolio. That portfolio will have preferred resources. It will also, hopefully, have some transmission fixes and some gas generation.

Our basic criteria for the portfolio is going to be reliability, but at the same time maintain reliability but doing it in the least economic cost and least environmental cost.

So, again, look forward to hearing your comments today.

President Peevey.

PRESIDENT PEEVEY: Thank you very much, Chairman Weisenmiller. I agree with everything you said. Thank you.

(Laughter)

CHAIRPERSON WEISENMILLER: That was easy.

MR. BERBERICH: Well, I don't know how to follow that up. I'll just say a few things here.

Commissioner McAllister, I certainly appreciate you having us here today and thank you for chairing this event, and all the other distinguished colleagues I have up here on the dais.

The loss of San Onofre is certainly an important issue here in Southern California. The grid in Southern California is much more fragile without it, lacking the voltage support, the energy, and the actual inertia you get from such large-moving mass.

With all that being said, I think there are multiple ways we can go about replacing this power and

the other attributes that San Onofre brought to us and I think we need to be thoughtful about how we do that.

I think there's probably an all-of-the-above opportunity for us that includes preferred resources, transmission assets, as well as probably leaning a little bit more on the existing generation plants that we have now.

So, we'll have to work through all of that. Nonetheless, I'm optimistic that we can get through it. But we are at type -- I do want to make sure I manage everyone's expectations, though.

You know, one intense scenario over a hot summer we get down to about 4.5 percent operating reserves. At 3 percent operating reserves there's load shed. So, we're about 1 and a half percent under very hot, very difficult conditions, so I want to make sure everyone understands that.

We should all be concerned about it, but I don't want anybody to be alarmed about it. I think we can get through if we're all thoughtful about it.

Nonetheless, in today's discussion we can highlight some of the issues and we can also highlight some of the solutions I think that can be brought to bear, including renewables, and demand response, and energy efficiency.

MR. NAZEMI: Good morning everyone. I want to thank CEC, Chairman Weisenmiller and Commissioner McAllister, as well as California Public Utility Commission, President Peevey for inviting me to this workshop and including South Coast Air Quality Management District, and Cal ISO, Steve Berberich.

And part of the L.A. Basin and San Diego Electricity Reliability Task Force to look at how we can better address the electricity needs in this region.

I think the issue of electricity and reliability certainly goes beyond SONGS closure. But, of course, SONGS closure made the issue more imminent in terms of addressing the concerns.

But we have to make sure that there is support to renewable portfolio standards, as well as all of the clean air plans, and South Coast Air Management District Air Quality Management Plan relative to the ports and goods movement, and the electricity needs for even plug-in and electric vehicles that are being provided.

So, our agency's position is to support clean, but reliable source of electricity and to avoid having to go through another electricity crisis like we did in the early 2000-2001. And with that, thank you again.

COMMISSIONER MC ALLISTER: Thank you very much.

And Vice-Chair Spivy-Weber and then Commissioner

Florio.

VICE-CHAIR SPIVY-WEBER: Thank you very much. I am very pleased to be here representing the water interests. As you know, the State Water Resources Control Board has a mission to -- oh, I'm sorry. Okay.

The Water Resources Control Board has a mission focused on water quality and water rights. And so some of you may wonder why we are here with energy folk. I'm looking out in the room and I recognize very few of you.

That's going to change. It's changing now. Energy is the second largest expenditure of water agencies next to personnel. Water agencies know energy. They are great partners.

When an organization like ours has a conflict of mission with other agencies, out approach is to work with those agencies to see if we can solve the conflict or figure a way to work through the conflict.

And you'll hear more from Jonathan Bishop a little later in the program on our once-through cooling policy and how we have done it with that using the expertise of the energy agencies.

There are also opportunities for collaboration when there are overlaps in mission. And as I mentioned, the water agencies do know the energy issue.

This summer, because of SONGS, but now actually

in a statewide effort there is joint messaging that was instigated by the Governor's Office and some of the agencies within the Governor's Office, but also by the water agencies, the nonprofit groups, like AQUA, that work with the water agencies, the WETCAT which is a water energy team of the Climate Action Team to joint message.

That joint messaging was brought together very quickly and it is out, and ISO has been distributing information. Now, almost all of the agencies that I know of, who are issuing messaging on demand response are using the joint Save Water Save Energy.

So, I want to encourage all of you, if you've not met your local water provider and worked with him or her, you should do that now. Thank you.

COMMISSIONER FLORIO: Yes, thank you. I'm Mike Florio, CPUC Commissioner and the Lead Commissioner on the long-term procurement proceeding where we authorize the investor-owned utilities to procure new resources to meet need.

The closure of San Onofre in conjunction with the scheduled closure or replacement of the once-through cooling plants along the coast provide us with both a challenge and an opportunity.

The challenge is to replace thousands of

megawatts of existing generation and keep the lights on in the L.A. Basin.

At the same time it's an opportunity because we have the change to reshape our electric generation portfolio here in California and give priority to the so-called loading order or preferred resources, energy efficiency, demand response, renewables, distributed generation, as well as electricity storage.

We have a challenging task in that many of these resources are not yet at scale and we have to balance our desire to get as much new clean energy as possible with both the cost to consumers and maintaining the essential reliability that's the life blood of the Southern California economy.

So, we have a big job in front of us and I'm looking forward to learning a lot today about how we can move forward together to meet the many and disparate needs of Southern California in the most cost-effective way possible. Thank you.

COMMISSIONER MC ALLISTER: Thank you very much Commissioner Florio and everybody on the dais here for your insightful comments.

And I also wanted to give the opportunity for any public officials, who happen to be in the room, a chance to say something very briefly. Or online, too, I

guess we may have some online.

But I wanted to give a chance to public officials. I understand there may be a mayor in the room with us. But any of them that we have not foreseen or captured here, it would be great to know that you're here and hear what you have to say, briefly.

MS. KOROSEC: So, if there's anyone online, public officials who would like to make a comment, please hit the raised hand.

COMMISSIONER MC ALLISTER: Okay, it sounds like no. Well, let's move on with the agenda, back to Suzanne.

MS. KOROSEC: All right, our first speaker is Michael Jaske, from the Energy Commission, to give us an overview of today's topic.

MR. JASKE: Good morning. My name is Michael Jaske.

Commissioners, board members, executives of agencies in this presentation I'm not going to talk about process, I'm going to talk about analytics and try to give you some background in which you'll be able to better appreciate the individual studies that you'll hear about through the course of the day.

So, why are we here? As several of you on the dais have said, electricity infrastructure planning is

going to be the balancing of preferred policy goals with our evolving understanding of reliability.

And I want to emphasize that point among all of these points because it's our emerging understanding of what reliability means in a long-term planning horizon, local capacity studies and what they mean about the location of generation, operating flexibility studies and what they mean about the type of generation that provide a context in which public policy can be pursued.

I'm going to spend a few moments going through these five fundamental driving forces. These are the things that are inputs into or constraints on the various studies that you'll hear about in detail.

So let's just look at demand forecasts for the moment. This is a set of them that the Energy Commission staff has prepared and that the Energy Commission has adopted; three of them. These are for the Southern California Edison planning area, alone, but that's illustrative of the whole Southern California area.

Over time there's a progression of lower forecasts in the ten-year-out period. And this is largely a function of the failure of our economy to rebound from the recession in the second half of the last decade.

And also, the introduction of yet-further energy efficiency, sort of serially in each one of these rounds of forecasts.

So, depending on which one of these forecasts uses the jumping off point for a study, you can imagine the study results might be somewhat different.

Amplifying upon that point about additional energy efficiency, here's a simple chart showing the amount of peak savings from what we call incremental achievable energy efficiency for the Southern California and San Diego service areas combined.

It's this red line at the bottom, the lower level that you'll hear discussion about in several of the presentations today and what its impact is on local capacity and operating flexibility studies.

Our OTC capacity is aging. All of those bars on the left are the composite of either individual plants that have come online, or multiple plants that came online in single calendar years.

You can see from the scale that that's from the mid-fifties to the mid-seventies. That was a long time ago. Those plants were on their way out even before the OTC policy. They had changed their role from energy generators to load-following or peaking.

You see in the middle the four nuclear units

that came along in the mid-eighties, once they became operational.

And only in more recent years were there a few OTC plants that happened to be combined cycles that L.A. and Dynegy constructed.

So, our OTC capacity was aging and is needing to be replaced for that reason, in addition to its environmental impact.

So, here's a list of the plants, on the left-hand side, that are OTC facilities, either whole facilities or units.

You can see -- and they're listed from north to south, not in alphabetical order. The map on the right-hand side shows you where they are, if you don't know.

We already have quite a number of these facilities that have retired simply since the May 2010 adoption of the OTC policy.

That's no surprise. The compliance dates for those plants were chosen because we already had infrastructure in the pipeline that would replace them.

It's the plants that are targeted to 2020 that were always problematic, that we put farthest out in time so that we would have the ability to fully understand the infrastructure implications of them and their replacement.

And let me just note that San Onofre, while it's retired and is down in the bottom half of that list, is still consuming water. It will be consuming water for many years to come for spent fuel cooling and other aspects of that nuclear facility.

It's usage may be comparable to an operating power plant, so that's another factor to keep in mind.

Renewable development is a key public policy. It's also a presumption in all of the studies you're going to hear today.

This is a particular chart showing ISO-wide penetration of renewable capacity of various technologies. We're in a period, as you can see, where it's rapidly increasing. It will slow down and then plateau as we reach the RPS target, perhaps a little earlier than actually had been anticipated.

Why are renewables important? Renewables are important because they give rise to this whole issue of what's called operating flexibility.

Let me explain what this chart is. This chart is a depiction for a single day, using the actual load shapes and production profiles from wind and solar from March 22nd of this year.

And this shape will change depending on the particular day we're talking about, how the wind blows,

whether the sun shines, cloud cover, the nature of customer load.

But it will also evolve over time, even if those same conditions were repeated, as the proportions of renewables increase in the system.

And as that set of renewables increase there's a greater and greater reduction in load during the middle parts of the day, and an ever-steeper amount of ramping that is required in the evening parts of the day.

And this is what -- when you hear presentations later today about operating flexibility, this is the challenge that the ISO, as the system operator, and the generators in trying to bring together the technologies that can actually sustain this double ramping are going to have to overcome.

We also have geography issues. Let me just highlight a few of them. Local capacity studies are inherently recognizing that there are sub-areas within broad regions that are transmission constrained.

The nature of the grid is simply such that we have to have capacity located within certain geographic areas unless the transmission system is radically altered.

So when ISO staff will be talking about local capacity study results, they're going to be

distinguishing between L.A. Basin versus Ventura, Big Creek versus San Diego. Capacity that's surplus in one area isn't fungible to help a deficit in another area.

We also have to deal with the issue of the fact that in the broader Southern California area as a whole we have different air quality management districts with their own unique sets of rules, their own offset situation and all of which have to be dealt with in terms of is there a match between the need for capacity from an electrical perspective and the ability to locate fossil capacity from an air quality perspective.

Here are just a few items having to do with the whole air quality issue. And let me point out, a semantic issue in the very first bullet there, when I say "severe" I'm using "severe" just in the colloquial English sense of the word, not as a designation actually for several criteria pollutant. South Coast is in the extreme category from a USEPA designation perspective.

The AB 1318 studies that you'll hear described this afternoon are attempting to come to grips with the need for capacity additions for reliability purposes and whether those fossil facilities can, in fact, be permitted within the South Coast Air Basin.

That's the purpose of that half of AB 1318 and we are right at the cusp of being able to bring forward

a detailed draft report for public review.

Today you'll get a glimpse of a few of those results in our afternoon session.

I've hardly mentioned SONGS throughout this presentation, but SONGS has its own unique impact on top of all of these things that I've just mentioned.

It's in a local reliability area. It's integral to the stability of the Edison or a portion of the Edison and San Diego systems.

Through its operation as a baseload plant, with an 82 percent capacity factor over this decade long period it's a major energy contributor.

Most of the studies you're going to be hearing about today are focusing on the capacity side of things.

And the energy replacement for SONGS really will not be talked about today, but is an issue before the PUC and its procurement proceedings.

This is a list of infrastructure assessment study types. We're going to mostly be hearing about local reliability studies, the first sub-bullet, or system operating flexibility studies, the third bullet.

The other ones are still important. And all of those different facets of reliability assessment are somewhat independent of each other. You can satisfy one and not meet the criteria for another.

And so the strategy of evolving a resource mix over time has to balance all of these things for reliability with the air quality and water quality standards. And it may well require iteration back and forth to fully satisfy all of those things.

This is a list of the studies that you'll hear bits and pieces talked about later today. It's only in the 2011-12 transmission planning process of the ISO that LCR was actually analyzed ten years forward and we better understood the geographic constraints on where power plant capacity had to be built.

It's in the 2012 TPP cycle that a lot of the detailed analyses you'll hear about today come from, and ISO studies of operating flexibility for the PUC in both the 2010 LTPP, special studies for AB 1318 and other studies now underway for the 2012 LTPP helping us to understand that dimension of capacity requirements.

And then Edison and San Diego are bringing analyses forward today particularly focusing on transmission and some of the other dimensions where they will actually be the ones having to upgrade the transmission system or to implement various kinds of demand-side programs.

There are a lot of analytic challenges in assimilating all of these results, and what their inputs

are, and what their methods were.

One of the challenges before all of these policymakers sitting at the dais is to understand the degree to which these different facets of reliability constrain their opportunities for exercising public policy goals through time.

We have a real need to both pursue those, as well as assure that we have reliability. And as we understand reliability more fully through these various sorts of studies I've mentioned, and how it becomes real in -- particularly in the case of the SONGS outage and its now retirement, it's going to be a real push/pull between reliability and public policy goals.

We've made a fair amount of progress on the generating side of things. What remains is to better understand what some of the transmission system options are.

And the ISO will bring forward some of those ideas, along with San Diego and Southern California Edison in the session to follow.

We clearly need to understand how South Coast rules and air quality attainment strategy are going to influence fossil power plant development.

And we hope that Mr. Nazemi will be able to enlighten us on some of that today. Perhaps more over

the next couple of months as the AB 1318 report is rolled out and public workshop is discussed.

And lastly, the very last bullet on this page, given the nature of the SONGS outage and its impact on the system, resource procurement decisions are going to have to be made even though information is incomplete, and imperfect, and that's just the nature of the job of the public policy maker.

Thank you very much.

And now we'll hear from CPUC staff.

MS. KETABI: Thank you, Mike. Make sure you can hear me.

Esteemed members of the dais, ladies and gentlemen, my name is Noushin Ketabi and I'm a Senior Analyst with the California Public Utilities Commission, the Energy Division. I work in generation and transmission planning.

I'd like to begin my presentation by providing the context around the CPUC's role in procurement. The CPUC ensures that the investor-owned utilities, San Diego Gas and Electric, Southern California Edison and PG&E maintain electric reliability on behalf of their customers.

We evaluate the need for new resources to meet local area and system reliability needs through our

long-term procurement plan proceeding.

And in the LTPP, as we call it, this sort of assessment of needs and authorizations requires a balance of several factors, some of which I've listed here.

Notably, safety, reliability, ratepayer cost and State goals, which are traditionally what we deal with are environmental in nature.

So, recently in the LTPP our decisions have authorized resources to replace the retiring OTC capacity. The current LTPP actually has expanded its scope to assess the reliability need presented, both in terms of local area and system with the SONGS retirement. So, we're taking a look at SONGS right now.

And just as with our OTC authorizations and, really, any of our authorizations in the LTPP we expect preferred resources to be a really critical piece of the puzzle as we look to authorize whatever replacement capacity would come from an LTPP decision.

So, let's turn to OTC and the CPUC's work on it. Over the last several years, as I've mentioned, the CPUC has been authorizing new resources to replace OTC. In 2013, alone, we've seen over 1,800 megawatts of new resources come on line in the L.A. Basin local area to meet OTC-related reliability needs.

In fact, in the last two weeks alone we've seen over 500 megawatts of new resources come on line. In fact, a few months earlier than anticipated.

So, resources are coming in, new resources are coming into play.

And in addition, this year we have authorized more capacity in three of the Southern California local areas, Big Creek Ventura, L.A. Basin, and San Diego. Again, this is just sort of step in where OTC is stepping out.

Turning to this map here, this presents sort of a clean picture of the Southern California local areas. They're laid out there for you.

You see the existing OTC units there, including SONGS. We have been working diligently through the LTPP, and have authorized resources to step in to meet reliability needs presented from these units retired.

As you see here, and SONGS, which I'd like to point out for those of you who don't know, lies on the border of two critical local areas in the State, L.A. Basin and San Diego, as it shows here on the map.

So, we are focusing on SONGS at this time and given that it's on the border of two local areas, it's critical to meeting both of those local area needs, as well as system operating flexibility needs, which Mike

explained.

Focusing on the L.A. Basin to address the approximately 5,000 megawatts of retiring OTC, the ISO studies in the LTPP identified 2,400 to 3,700 megawatts of need.

This analysis assumed SONGS online. This was due to the timing of these studies, this was before the SONGS outage, and did not include all of the preferred resources that the PUC reasonably expects to be available in the L.A. Basin.

So, the PUC, then accounting for those preferred resources authorized Southern California Edison to go forth and procure 1,400 to 1,800 megawatts to meet the local -- or yes, to meet the local reliability need. Excuse me.

In that same decision we also authorized 215 to 290 megawatts of resources in the Big Creek Ventura area, as well.

So this slide actually presents a picture of exactly the role that preferred resources have played in our authorization, our L.A. Basin one.

So you see at the top, the top bar shows that the ISO's identified need was 2,400 to 3,700 megawatts.

The PUC then, you know, taking a reasonable assessment of our preferred resource programs out there,

identified 1,000 megawatts that we expect to be available to meet the reliability need in the L.A. Basin.

So then accounting for those 1,000 megawatts we then authorized Edison to go forth and procure between 1,400 and 1,800 megawatts, as I mentioned.

And this is somewhat simplified. It's actually a little bit more detailed than this, but the breakdown between preferred resources and gas-fired procurement, preferred we have 200 to 800 megawatts must be preferred and gas 1,000 to 1,200.

And there's a little bit of overlap, you might be able to see, hopefully, and that's due to where Edison, you know, makes that breakdown to be between those two general categories.

And I'd like to point out, actually, that if you see that, with that 1,000 of expected preferred resources, plus even just a minimum, if SCE were to go out and procure 200, we're looking at lying right in the 50 percent range in terms of the reliability need.

So, we see preferred resources as really playing an important role in the L.A. Basin and our authorization speaks to that.

Moving on to San Diego, the ISO studies identified 730 megawatts of local area needs. Again the

analysis, due to timing in part, assumed SONGS on line and did not include all preferred resources.

So, once again, after accounting for those preferred resources, the PUC authorized 343 megawatts in the San Diego local area.

So, again, a similar chart tells a similar tale. We have 730 megawatts in San Diego identified by the ISO. The PUC then looked and accounted for an additional -- accounting for 387 megawatts of preferred resources not in the ISO study, and then authorized San Diego to procure 343 megawatts, 45 of which are actually an approval of a power purchase tolling agreement for the Escondido Power Plant. That's a repower and that would be coming online in the shorter time frame.

So turning to SONGS, as I mentioned the LTPP is evaluating both local capacity needs in the L.A. Basin and San Diego local areas, given that SONGS is on the border of those two, as well as system operating flexibility needs.

We've asked the ISO to model both the interim and long-term effects of the SONGS retirement, and that's to assist in guiding our procurement authorization. It really helps us to understand sort of the when do we need these resources available and to what extent.

The PUC, in its authorization, will need to balance resource capabilities, operational needs and GHC impacts. And I mean that, in some sense is no different than any authorization but, in another sense, is actually that much more critical given the fact that SONGS is 2,200 megawatts of a relatively GHG-free resource.

So, really thinking about our long-term State GHG goals, as well as our reliability needs and our operational needs are really, you know, very critical in this decision.

So under current timelines our study results are expected soon, with our proposed decisions, in late 2013 and early 2014.

This gives you a little bit more of a detail of our analysis so you understand the time frame from the PUC's perspective.

Back in December, when we were creating our planning assumptions we adopted a no-SONGS case. So, we were planning already for potential system needs arising from a SONGS retirement.

Then in May of this year the LTPP scope expanded to account for a no-SONGS local area analysis. And you'll note that the timing was actually even before SONGS officially retired. And from the PUC's

perspective, from the point that we realized that it was reasonable to really start thinking about a life post-SONGS, you know, we took the analysis to the local level.

And actually next month we'll be expecting our analysis coming in and testimony on the local area needs stemming from the SONGS retirement.

Approximately a month later we'll be having testimony on system needs.

And then in December of this year we'll have the decision, a proposed decision on local area needs and then the proposed decision for system in March.

Again, this is current timelines.

So, let's focus on preferred resources for a moment. For those of you not familiar with the loading order, it's a guide to CPUC's procurement decision. It was established in the Energy Action Plan by the energy agencies a few years ago.

And, essentially, it states that we will seek to meet our energy needs primarily from energy-efficiency and demand-response resources in the first order.

Next through renewable generation and then, finally, any residual needs will be met through clean fossil fuel generation.

So, this is our guide in the LTPP as we balance

the many considerations I laid forth earlier.

And with OTC replacement, again the PUC expects that we can build upon the good work we've done with the OTC replacements and really look to make preferred resources a significant portion of the solution.

So, we'll see how that plays out. And, of course, that requires, however, balancing the operational needs of the system and the local areas in any authorization that we do.

This slide actually focuses in on those operational aspects of the resources. There's some of our resources are laid out here and the table seeks to sort of gives us somewhat of a simplified picture of the various operational characteristics of the sampling of resources. And it also seeks to explain their GHG impact and, again, in a very simplified manner.

And for me, the real takeaway from this chart is that, you know, there's no silver bullet when we look to assess the reliability needs that will arise from the SONGs retirement and what resources could perhaps step in and fill that need.

And so we really look to balance these operational benefits that each resource is able to provide, and the GHG impacts. Particularly as we once again look to replace approximately 2,200 megawatt

relatively GHG-free resource.

So looking forward, again PUC expects our proposed decisions on our SONGS local area and system analyses to be coming forth shortly.

In December we'll have the local area proposed decision and March the system operating flexibility proposed decision.

We look forward to collaborating with the ISO, CEC, other State agencies, and our parties in determining the reliability needs that are presented and to assess sort of what would be the most balanced portfolio approach that we can take to any authorizations.

And as I've mentioned, we see preferred resources as holding a special place in there.

So, thank you very much.

MS. KOROSEC: Our next speaker is Jonathan Bishop from the State Water Resources Control Board.

MR. BISHOP: Good morning members, thank you very much for having me here. My name is Jonathan Bishop. I'm the Chief Deputy Director for the State Water Resources Control Board.

And I'm just going to take a short time here to talk about the once-through cooling policy, what we were hoping to accomplish with that and where we have

flexibility as we move forward.

The goal to the once-through cooling policy was to minimize entrainment and impingement on marine organisms.

It laid out a series of compliance options for doing that. Essentially, a two-track program where one track would allow for retrofits with closed-cycle cooling, which is those cooling towers, to reduce the amount of water being pulled into the plant, or through equivalent measures, what we call the track two system.

And also envisioned that some of the plants could go through a repowering where essentially they, in our terms repowering would mean tearing the facility down and putting in a whole new power plant on the same location, or to cease operations, all of which would satisfy the requirements.

As you'd heard earlier, many of these facilities are old and antiquated technology. They were running at a very little capacity factor. This was fitting in with the general scheme of our energy agency partners to move forward.

Though we did recognize that anything that impacts power plants has an impact on the grid and so we worked closely with the energy agencies, the PUC, the Energy Commission, the Cal ISO, the State Lands, State

Coastal Commission and ourselves to ensure that we had an implementation plan that took into account the issues related to grid reliability and permitting.

So, we set up a staggered compliance schedule which was largely based on recommendations from the PUC, and the Energy Commission, and the Cal ISO.

We required that the generators submit a plan on what they're going to do and how they would come into compliance to provide the energy agencies with a better understanding of where things were going as we move forward.

We also developed a statewide advisory committee on cooling water intakes structures that are called SACCWIS. SACCWIS reviews those plans, look at an annual basis on the grid reliability issues, the local and general grid reliability, and makes recommendations to the State Water Resource Control Board on any changes that might be needed in the schedule.

Since it was clear to us that the energy situation was fairly dynamic at this point in time in the State, in the grid, that we needed to have flexibility and the ability to make changes in those schedules as part of the program, so we built in some modification opportunities that were short term modifications that might be identified as --

essentially, emergency extension. For a 90-day suspension or less it's automatic.

A greater than 90-day suspension of a compliance date can be requested by the Cal ISO and the State board will hold a hearing within that 90-day period to determine if that suspension is warranted.

There's also a longer-term, non-emergency extension. Essentially, if we look forward and say that in five years we would need to have a change, the SACCWIS can make that recommendation to the Board, the Board can hold a hearing to have that and modify the schedule.

As you might know, we did that with the schedule for the LADWP plant so that they could have a more integrated approach to their rolling out of both their integrated resources, their transmission upgrades, and their once-through cooling retirement. So, we changed and modified the schedule so that that would work better for them.

We anticipate that if the need arises, we will do the same thing associated with the retirement of SONGS as we move forward.

And that's all I have for the moment and I'll be here later to answer any questions.

MS. KOROSEC: All right, next we're moving to

our section on analyses of implications of SONGS retirement and options for replacement. And our first speaker is Phil Pettingill from the California ISO.

MR. PETTINGILL: Well, good morning Commissioner McAllister and the other distinguished members of the panel here this afternoon and today.

My name's Phil Pettingill. I'm the Director for Regulatory Strategy at the ISO.

And consistent with the theme of today what I wanted to do was walk through with you a high level summary of the infrastructure analysis and needs that the ISO has done with some of our studies.

And when we look to the future, without San Onofre as a generating station on the system, there are significant issues that arise.

Our time frame is looking out over the next ten years. And so what I thought I'd do is start with where are we today?

And in terms of the summer of 2013 what we identify is three sort of major areas of concern. And, basically, what you see here in the diagram, number one is in South Orange County and the connection between the Los Angeles Basin and the San Diego load pocket, and you heard Mike Jaske talk about load pocket. So much of what I'm going to refer to is what happens in these

local areas.

And just by definition, so we all understand, a load pocket is basically a portion of the electric system where the transmission coming in to that load pocket is dependent on generation being within that pocket. So, it's inadequate to serve all the load and meet our criteria.

But what happens here, in issue number one, is the ability to move energy from the Los Angeles into San Diego. And what we need then, what's referred to here is megavars.

And this is reactive power. It helps us move the energy from one area of the system to the other. We need more of that in order to be able to compensate on the system for the loss of, really, two significant transmission lines.

And those are reflected in the southwest corner here with the Sunrise Power Link and the Southwest Power Link.

The second major issue that shows up is basically transmission configuration issues. And I've highlighted the Barre-Ellis line because what it's identifying is moving energy through the system without SONGS, starts to identify specific areas within these two load pockets where transmission upgrades and

reconfiguration can be helpful.

And then finally, the third issue, the south of Lugo is basically indicating that we have a constraint in this 500 KB transmission lines that are in the Lugo area. And as a result we need to identify additional resources within the L.A. Basin and San Diego in order to meet reliability criteria.

So this is where we are today. We're able to meet that criteria and we're able to go forward over the next year or two.

But what you'll see in the rest of my presentation is things do start to get challenging. And so jumping ahead, just leaping ahead to the ten-year horizon, as Noushin was talking about, and this is what we've started to discuss in the long-term procurement proceeding what starts to happen.

And certainly, the timelines associated with the once-through cooling policy starts to affect major quantities of generation resources in these two local areas.

So what I do is draw your attention to the L.A. Basin and what we see here is our transmission planning process looked forward and saw approximately a need for 4,600 megawatts of capacity in the L.A. Basin when we see the loss of SONGS, and if we assume all of the once-

through cooling plants actually shut down and went away on their prescribed schedule.

The other number you see, creating the range here, the 3,400 megawatts in the L.A. area is actually a study that we're doing, and Mike Jaske referred to it. AB 1318 required an analysis to look at what were the capacity requirements in the L.A. Basin and would they potentially require a need for new air credits or emission allowances in that load pocket.

And what we did is we applied the 1,000 megawatts of energy efficiency and demand response that we saw on Noushin's slide and said, well, what would happen. And you can see that it does reduce the requirements in that L.A. Basin by about 1,200 megawatts.

So, there is benefits with the preferred resources as we look at overall needs ten years forward.

Now, I'll just point out in the San Diego load pocket we have a similar challenge. It gets a little bit more challenging in the sense that when we look forward beyond 2018, and the asterisk here is the Encina Power Plant coming into compliance with once-through cooling, going away basically at the end of 2017, starts to create a fairly significant need of about 1,100 megawatts. And there's only 946 megawatts of once-

through cooling.

So, we're going to have to find some additional resources in order to meet requirements.

So that gives us a sense, a framework of where things are going to be in about ten years from now. And what you're going to hear as I go through the rest of this is, certainly, we can see different mixtures and different possibilities, but this gives us a scope of what the needs look like looking forward.

So let me come back and just basically talk about the transmission plan that the ISO does. This is an annual study that we do. We look at the upcoming years, one through five, but then we also look forward, ten years forward.

And really what's important here, in our discussion today, is what did we find ten years forward when we analyzed the loss of SONGS and the compliance with the once-through cooling schedule as it's currently laid out.

Then I'll also talk a little bit about what the ISO Board approved as a result of these studies that came out of the 2013 cycle.

This came to the ISO Board in March of this year and so there were some transmission adjustments that we proposed and were adopted.

Now, basically on this slide what I'm reinforcing is a number of things that Mike Jaske had in his presentation. There are some major inputs that we need to consider and all of these are somewhat in flux when we try to look forward as much as ten years.

But clearly, some of the highlights of this is what's the load forecast? What should we assume consumers' demand will be in ten years from now? How much of the preferred resources, and particularly energy efficiency and demand response can we have the confidence and assume that will be there?

We also need to deal with the aging fleet and also the once-through cooling schedule when we try to look forward as much as ten years from now.

And, finally, I've already touched on the local capacity elements. But there is another piece and that is the integration of renewable resources. The State has been very successful in driving towards the 33 percent RPS.

But what that does in terms of system operations is it starts to take us along that chart that Mike Jaske was showing us, where there's significant challenges in meeting those ramps in the morning and in the afternoon because of the success in achieving RPS goals on the overall system.

So in short, what I wanted to do is walk through with you what have we discovered in the mid-term and the long-term studies that came out of the transmission planning process.

We did look at what happens with the loss of the San Onofre Generating Station. I'm going to take you through what some of the possible mitigations might look like.

But I think more importantly the issue is while this is one set of possible solutions, clearly any set when we go forward over ten years, does need to consider what are the contingency plans.

What if the things we're expecting to happen don't happen? And what sort of contingency actions can we take.

So with that in mind, when we look at the mid-term and this is really looking out to January 2018, and as I mentioned the most significant change that occurs here is compliance of the Encina facility in meeting the once-through cooling policy.

And here the view we have is really sort of two possible options. One, the piece that we have in place, that started here literally just about a month ago, was some synchronous condensers in Huntington Beach.

Now, I mentioned earlier VARs, and what the

synchronous condensers are doing is providing the megavars that help us move energy currently and over the next four or five years from the L.A. Basin into San Diego.

But when we look out and we say what happens if the potential retirement of Encina were to occur, then all of the sudden we start to see fairly significant needs in the San Diego area.

And one combination is about 800 megawatts being replaced in or about where the Encina facility is and another 300 megawatts elsewhere in the San Diego system.

But you see that there's still a need for additional megavars in order to help the energy move around.

Another opportunity is to look at 965 megawatts in the San Diego system. But again, where those are located and how many megawatts we need is really highly dependent on where the facilities are and when they come into play.

And finally, a little highlight is the notion of a new transmission. And the Sycamore to Penasquitos line was something that was approved by our board and allows to help bring in renewables into the area, but also optimized the flow in and around the San Diego system.

I'm sure Will will touch on that later.

So we look forward, beyond the ten-year horizon, and into about the year 2022.

I'd mentioned earlier that our transmission planning studies identified about 4,600 megawatts that would be required in the L.A. Basin. But what I wanted to highlight here is that's only one possible outcome.

Again, framing how much needs to be done, because there's another opportunity here, which is possibly less resources in the L.A. Basin, but then needing to add additional resources in San Diego over and above what we have done to try to be ready for 2018.

And you notice this is really only about a four-year difference between these mid-term and these long-term results.

Okay, so to summarize in terms of some of the specific solutions or mitigations that we can use to meet these needs, what we're seeing between 2014 and 2017 is really a gradual increase in needs. And that gradual increase is really just coming from load growth.

There's approximately 300 megawatts of load growth in the L.A. Basin each year and about 80 megawatts that's happening in the San Diego system on an annualized basis.

So our challenge is, when we look beyond 2013,

to continue to rely on the things we have available to us, which are the flex alerts, asking for voluntary conservation, but also trying to develop and utilize the demand response and the other resources that we have on the system.

And finally looking forward, which is what can we do to add more VARs to help us move the energy around that we have, starting to introduce more megawatts with the Pio Pico project you hear, and potentially in 2016, and can we accelerate that forward just as partly a contingency, and that Sycamore to Penasquitos line, as well.

So, these are some of the key steps over the next three or four years that help us resolve the mid-term.

Specifically, in 2018 I already mentioned that one of the key things that happens here is the potential loss of the Encina facility. And when we start exploring what are those opportunities, certainly there's a great opportunity here, because we've got a few years, to try to introduce additional preferred resources between now and that point of January 2018.

Clearly, one of the contingencies here, though, is potentially going back to our friends at the Water Board and talking about a need to extend or modify what

the compliance schedule is in order to achieve some of these particular goals.

Now, we need to understand how long it will take them. We need to be fairly clear on what that request might be but, certainly, that's an area where we can see a contingency plan in the 2018 time horizon.

Now, moving beyond 2018 what starts to happen is, again, we're just relying on or having to deal with load growth, and how do we compensate for load growth on the system basically, still, in the San Diego area as that continues to grow.

And then beyond that we look at the 2021-22 horizon and this is where the issues start to bounce back to the L.A. Basin.

And as I've already mentioned, one scenario is approximately 4,600 megawatts of new resources in L.A. The other scenario is 3,800 in L.A. and 800 to 900 in San Diego.

Well then, finally, we start to introduce the concept of transmission. And we do believe that we really should start to look at infrastructure changes from the transmission perspective.

And so you see the third option here is basically connecting, making a stronger connection from the L.A. Basin to the San Diego load pocket.

And by introducing a fairly robust transmission solution we could look at potentially reducing the quantity of resources in both load pockets.

And Mike Jaske had already mentioned that if we look to the draft IEPR forecast for 2013 it does look like we've got some help on the horizon in terms of a lower load forecast and, potentially, relying on more uncommitted energy efficiency, and so forth.

So the target is moving but, clearly, the magnitude is still in the range of what it is we're seeing in many of these studies.

So, I mentioned transmission. And to give you a sense of the number of transmission options that are already starting to float around and some of them are already starting to look like they may not be all that feasible.

But walking through these real quickly you can see that there's 500 KB options with the number one option, the Alberhill/Suncrest line. This was actually included as a potential option in the ISO's transmission plan that was 2012-13 I mentioned that was adopted by the Board in March of this year.

But, clearly, there are many other options, like the Alberhill/Viejo, and including a new cougar substation.

And yet, we start looking into these and the feasibility of these and we start to realize that just siting, permitting and locating these facilities can be a very significant challenge.

So, including the fifth one I'd highlighted here, which is trying to look at the feasibility of actually a submarine table that would go through the ocean and connect the Alamitos area into the San Diego system and help move some of that energy through the system in that way.

So, let me start to summarize here a little bit by just saying that, again, prior to the SONGS shutdown we had already done these analyses and brought it to our Board as part of our normal transmission plan.

And the two things that were automatic, that were already approved at the time was the Sycamore/Penasquitos transmission line, as well as putting new dynamic VAR support in the San Diego area.

COMMISSIONER MC ALLISTER: For those of you on the web presentation, we're trying to fix the problem of synchronization between the slides and the audio. So, hopefully, for those of you in the room that's going on, the web is having some issues. So, sit tight and hopefully we'll fix it.

Actually, maybe we should take advantage of the

hiccup here to invite Chairman Nichols to say a couple of words, now that she's here and graced us with her presence. Excellent, thank you for coming.

CHAIRPERSON NICHOLS: Thank you very much. It's a pleasure to be here. I apologize for being late. Believe me, I would have rather been here than at the dentist, which is where I was.

(Laughter)

CHAIRPERSON NICHOLS: That may not be saying a lot but --

(Laughter)

CHAIRPERSON NICHOLS: This is an extremely interesting and important set of presentations that we have on tap for this morning and I'm looking forward to hearing more of them when we get our system fixed. Are we ready to go?

COMMISSIONER MC ALLISTER: No, it looks like he's still working on it.

CHAIRPERSON NICHOLS: Not quite.

CHAIRPERSON WEISENMILLER: Phil, one question while we're waiting.

MR. PETTINGILL: Sure.

CHAIRPERSON WEISENMILLER: So, one of the potential options is to delay the Encina retirement. What are the ages of the Encina units?

MR. PETTINGILL: You know what, I really don't know, but I know that they're significant.

Yeah, Jim do you guys know, or Will?

MR. AVERY: The Encina Power Plant consists of five operating steam plants. The first unit was installed in the 1960s. The unit five was installed in 1970 -- well, it was the mid-1970s. I think it was '73-'74 it went into service.

CHAIRPERSON WEISENMILLER: Okay, thank you.

MR. PETTINGILL: Are we ready?

COMMISSIONER MC ALLISTER: Phil, just a quick question.

MR. PETTINGILL: Sure.

VICE-CHAIR SPIVY-WEBER: I have a clarification to make.

COMMISSIONER MC ALLISTER: Yeah. No, go ahead and ask for your clarification, then.

VICE-CHAIR SPIVY-WEBER: Did I hear you correctly to say that you assumed in your studies that all of the facilities covered by the once-through cooling policy would be eliminated from the system? Maybe I misunderstood.

MR. PETTINGILL: No, you've got it correct. What we've done in the studies here is to basically assume the schedule that's in the once-through policy.

VICE-CHAIR SPIVY-WEBER: Correct.

MR. PETTINGILL: But the reason to assume that all of the plants are off is to show that the system could not reliability operate if they were to shut down.

And then that helps us then start to identify what megawatts need to be replaced, either by generation or preferred resources in order to then meet reliability criteria.

Because it will take a long-term contract in order to get those resources replaced or repowered consistent with the once-through cooling policy.

VICE-CHAIR SPIVY-WEBER: But that's not a -- you're not looking to the Water Board's Once-Through Cooling Policy to do anything about that.

MR. PETTINGILL: No.

VICE-CHAIR SPIVY-WEBER: That's another part of the system, right?

MR. PETTINGILL: That's right.

COMMISSIONER MC ALLISTER: Phil, I wonder if you could talk about other types of preferred resources, then generation. You know, you mentioned -- and we're working in other areas, not necessarily a core topic today with respect to the infrastructure, per se, but we are talking, obviously, vigorously with the ISO and the PUC about how to enable demand-side resources, demand

response and aggressive energy efficiency.

What's the sort of process by which the ISO -- let's say we have a demand response -- a demand response initiative that just knocks it out of the park and the ISO is able to detect, you know, in a given load pocket, you know, a different scenario based on some of the demand-side resources that are coming into play.

MR. PETTINGILL: Right.

COMMISSIONER MC ALLISTER: What's your sort of process to be able to take that, incorporate it into your modeling and then come up with different scenarios of how much supply side resources are actually needed, sort of in an ongoing basis as we move forward?

MR. PETTINGILL: Right. Well, I think the easiest way to answer your question is to sort of go back to the list of preferred resources that Commissioner Florio mentioned, right. There's energy efficiency, demand response, storage, other renewables, including rooftop solar, and so forth, and so on.

What we're doing is trying to identify what the system needs or requirements are. With that in place then we get to look to those preferred resources and talk about what are the characteristics that they need to have in order to help us meet the reliability criteria?

So for example, your question about demand response, demand response resources that can actually operate in less than 30 minutes would be consistent with the reliability criteria that we're required to meet through the FIRC and NIRC standards.

So, we're looking to develop and work with participants in what do those characteristics look like? And it doesn't have to be a single flavor or single design. We could come up with a myriad of different demand response products that would -- as long as it's consistent with that operating criteria would be able to help us.

Now, in our view it falls into sort of two major categories. One is just demand response that would be responsive to price and/or system conditions, right.

The second piece, though, is demand response that would actually be participating in our market, and in that way be directly dispatchable. So that the ISO has an opportunity to see it, know that it's there, count on it on a daily basis.

And then, you know, even adjust the dispatch that we're making as we operate the system in and out.

With those kinds of characteristics and understanding what those demand response products can do, then we start incorporating those in these kind of

planning studies. And assuming that they will be there, meeting our operating criteria, and then reducing the need for conventional plants or transmission.

And that's why what I'm going to say here to wrap up, as soon as we get done here, and this is the way I'll do it now, right, is just say that in our view the priority is preferred resources.

COMMISSIONER MC ALLISTER: Yeah.

MR. PETTINGILL: Let's lean towards preferred resources and look at what do they need to do in helping us operate the system.

The second priority then sort of comes into transmission because transmission helps us optimize the resources that we do end up getting on the system, and moving them around efficiently.

And then finally we say, well, with those two pieces what's left and start to talk about what kind of conventional facilities might be needed.

COMMISSIONER MC ALLISTER: Okay, thanks.

CHAIRPERSON NICHOLS: Just a question, Phil.

MR. PETTINGILL: Yes.

CHAIRPERSON NICHOLS: We all have our own insider terminology, but I'm not entirely clear what you mean when you talk about dispatchable demand response. What are -- give an example of what you mean?

MR. PETTINGILL: Well, sure. There's a fair amount of demand response today that's in the system, that basically we can't use it because of the way the tariffs describe it until we're in a system emergency, until the ISO has a significant contingency and then we get to go to those resources.

What we're talking about now is moving those types of products -- okay, moving the demand response to where, as I've seen earlier, be available day in and day out, and so we can actually use it to offset the dispatch of conventional greenhouse gas-emitting resources.

We need to be able to do it so we can use it in and out each day.

CHAIRPERSON NICHOLS: It would be a change, though, in the tariff or the legal description, not a physical change, necessarily.

MR. PETTINGILL: Right, right because it is a product that the customers are signing up for. So, we need to be clear on what it is they're signing up for, make sure we've got the right pricing, and then make sure it's providing the characteristics.

CHAIRPERSON NICHOLS: Thanks.

COMMISSIONER MC ALLISTER: There are actually new physical products that are -- that enable that

technology, but it sounds like maybe that's where Steve was going to jump in.

MR. BERBERICH: Well, what I -- there is a fiscal element of it as well. What we're looking for is particularly the intermittency of the renewables, as they move up and down we can also move load up and down.

And so if wind were to move down 100 megawatts, you'd want to dispatch demand response to reduce their load.

And, similarly, keep in mind the world of demand response needs to be considered to encourage consumption as well as decrease consumption.

Because as you saw that wavy slide earlier --

(Laughter)

MR. BERBERICH: -- that talked about -- well, I won't use the word because it's got --

COMMISSIONER MC ALLISTER: Duck.

(Laughter)

MR. BERBERICH: Anyway, there are times, particularly as you look to 2020 and you have a lot of solar on the system you may very well want to incent consumption because you'll be in an over-generation condition. So, that's part of the dispatchability.

And I want to make one other point about something that we were talking about a little bit

earlier. The framework in which you have to think about these once-through cooled units is the following: they are local capacity issues. That means you can't transmit enough energy into the local area to serve the load and you have to have generation in that load pocket. That's the local capacity element of it.

Secondly, keep in mind that California is embarking on a very ambitious renewable energy regime and we want to go higher than 33 percent. We may want to go to 40 percent or 50 percent.

In that way you must have a very flexible backup generation fleet. Those once-through cooled plants are not very flexible plants. They're older technology. They're 40, 50 years old. We want plants that can start, and stop and ramp.

Some of those plants take 30 hours to start, as an example, so you can't even shut them off because you need them.

So, that's the framework we have to think about as we start to plan this. We want clean, flexible, local capacity resources that can help us integrate even more renewables on the system. That's the framework in which we need to think about these once-through-cooled units.

MR. PETTINGILL: Okay, so let me wrap. I think

we've touched on most of these elements. I think the key piece I wanted to finish up on this slide is there is significant uncertainty and we're going to need to try to manage that uncertainty as we go forward.

It will be a comprehensive solution, as we've talked about here with some of the questions. It's going to be preferred resources, transmission, conventional resources.

And then it probably makes sense to have contingency plans in case those don't develop as we expect.

And then, finally, what I wanted to do is point out how will we finally make these final decisions. And most of you that are practitioners in this business will recognize these, but to be really clear and get it here, the ISO's planning process. We're going to help identify what the scale is and what the big numbers look like as I walked through.

But clearly, then we'll be participating with the PUC's long-term procurement proceeding in identifying what's the right mix, how to balance those issues that Noushin mentioned earlier.

And finally, the resulting approved projects or the approved capacity will end up at the Energy Commission to go through the siting process and make

sure that we get those facilities sited, permitted, and constructed in a timely manner.

And back to the PUC, where we've got transmission fixes or adjustments to the system in order to make sure that the transmission can be accomplished, as well.

And all of those will create significant opportunities for public input and discussion about what the final plan looks like.

So, thank you for your questions. I appreciate it.

COMMISSIONER MC ALLISTER: I had one more quick question. We're pretty much on topic, so I hope you'll indulge me.

So, I noticed Ms. Ketabi's presentation had a chart of all the technologies, and for reactive support, under storage it said "maybe". And I want to sort of see what your current read and possibly future read on storage and, you know, the PUC just has a nice decision out requiring that the utilities go procure some storage.

And I guess as far as your understanding of where things could be going, how much are we likely to be able to count on storage for that key reactive support, that dynamic reactive support that we need so

badly?

MR. PETTINGILL: Well, I don't think we really know. Storage is such a breaking technology that from our perspective, from the ISO's perspective we're big fans of storage. It can be significantly helpful.

Sort of as Steve was saying, storage can help us in the case where we need to have more load by turning on the storage device and actually creating a load.

It can also help us on the resource side by turning around and discharging and producing megawatts.

But as you say, depending on how that storage is actually connected to the system. We've dealt with this a lot in current technologies with the wind and the solar facilities to understand how are they actually interfacing with the electric system and can we get them to produce more VARs in helping us operate.

Now, it may very well mean how big is that storage system? How much energy can it hold in order to be able to produce the VARs over a long enough period of time?

And that's why I've sort of been trying to reinforce that what we're trying to do right now is identify the needs, and the characteristics of the needs, and then let's see where we can go to start to develop those technologies to meet that.

COMMISSIONER MC ALLISTER: Okay, thank you.

MR. NAZEMI: If I may just follow up on the two questions, I don't know if this works or not.

But relative to the preferred resources, I think our agency is very supportive of the use of preferred resources.

But just like Mary, I have a little bit of uncertainty about demand response programs, especially if the demand response is such that the load is taken off the grid through energy savings, that's one way to do it.

But if the demand response is equivalent to some of the commercial and industrial facilities that have, potentially, an interruptible service agreement then from our perspective we don't want them to switch over to D-cell generators as backup in order to supply they're own demand.

Even though they're off the grid, I think from an air quality standpoint and from community health I think that's not the right way to go.

So, I agree with Commissioner McAllister about storage. You know, we worked with Southern California Edison, they installed a 1-megawatt storage, battery storage at Catalina Pebbly Beach Generating Station. And I think that's the type of preferred resources that

our agency would like to support, rather than just switching over to backup generators.

CHAIRPERSON WEISENMILLER: Let me just make the observation that when you look at Phil's list of agency actions, certainly there are other agencies that may well be taking actions as part of the plan. Certainly, the Water Board, certainly the South Coast.

Again, this is not all-inclusive, nor was it meant to be all-inclusive.

MR. PETTINGILL: Right. No, that's true, thank you.

VICE-CHAIR SPIVY-WEBER: I have one question. Have you considered the use of water as a storage device?

I know we had a very intense and actually fruitful conversation with the energy agencies in and around the SONGS issue, and with the Metropolitan Water District who actually stores energy during the day so they can move it at night.

And if they switched their storage into the day, they could help their member agencies eliminate pumping.

And so it seems to me there's a partnership there that's quite available.

MR. PETTINGILL: Yes. No, absolutely, that's exactly right. We're going to see the marriage of water

and energy get much tighter and much closer over the coming years.

You said this in your opening remarks and I think it's exactly right.

Pumping load, from an electric standpoint, is fairly significant in this State. And we can start to see how moving that around to different times of the day or night can be extremely beneficial in helping us solve some of the electrical requirements, as well.

So, that's really a great observation and, agreed, we need to do that.

COMMISSIONER FLORIO: Phil, on the demand response issue, you know, we've all heard about how in some of the eastern states they have, you know, thousands of megawatts of demand response that have cleared in their markets.

Do we know, yet, whether that -- how much of that has the kind of characteristics we're talking about or is it just too soon to tell?

MR. PETTINGILL: Well, yeah, we know some things. Thank you, Commissioner Florio.

We do know some things and we are continually doing research, from the ISO, and looking into what the other ISOs are doing with their demand response programs.

But consistent with what Mohsen was saying with the South Coast Air District here is that a fair amount of the capacity that's clearing, for example the PJM capacity market is the type that's more emergency-based and that is backed up with some form of generator.

COMMISSIONER FLORIO: Yeah.

MR. PETTINGILL: And so, you know, consistent with the policies that you have at the Public Utilities Commission, those kinds of megawatts of demand response would not qualify here in California. And I think that's consistent with what our air emission goals are.

So, we are looking at it. But on the other hand, again staying with the PJM example, they are continually trying to modify their demand response market design to try to encourage not only the operating characteristics that we've talked about earlier, but also what are they going to start to do in adjusting what the emission profile looks like for the demand response products that they have.

COMMISSIONER MC ALLISTER: So, I would just kind of highlight the work that we're doing at the three agencies to try to figure this out. And, you know, with the roadmap that the ISO's working on for demand response, and then the process that we have with the IEPR at the Commission and working, really, across all

three energy agencies, and with the Air Board, as well, on trying to figure out, really, nuts and bolts of what this is going to look like.

And, you know, hopefully relevant for the mid and certainly for the longer-term resource choices that we really have in front of us to make this as ready for prime time as we can so it's a real alternative on the demand side.

MR. PETTINGILL: That's right.

COMMISSIONER MC ALLISTER: And in addition to, you know, aggressive energy efficiency and other kinds of initiatives. You know, we need to make sure that we know what we're trying to quantify so we can actually quantify it, so we can actually compare it, you know, apples to apples.

MR. PETTINGILL: Well, and then the other thing I would mention is we really need to be exploring other ways to acquire this demand response. You know, to really open up our thinking on what is the procurement process and the mechanisms that we're using to acquire those products, once we understand what they are.

COMMISSIONER MC ALLISTER: Okay, we've successfully gotten a few minutes behind, so we're going in a good direction here.

MR. PETTINGILL: All right, thank you.

COMMISSIONER MC ALLISTER: So, Suzanne, do you want to keep things moving along. Thanks very much.

Thanks, Phil, for your flexibility with all the technical issues, as well.

MS. KOROSEC: All right, our next speaker is Mark Nelson from Southern California Edison.

MR. NELSON: I'd like to thank the panel for inviting us to speak and be involved in this discussion. It looks like this is self-serve so I'll have to figure out how to do it. We'll go for simple. There we go.

All right, so first I'd like to talk a little bit about this summer because, obviously, the last two summers have both been about San Onofre and it's been an effort to get those dealt with so that we have reliability for the summers.

On the transmission side, on the 230 system we put in four banks of capacitors at three different substations for this summer.

We also decoupled the 230 line at Barre-Ellis. Essentially, that was four lines that went into two terminals and we put them into four terminals. So, if you think about it, it's a little bit like saying I've got four extension cords that are in two outlets and now I've put them in four outlets. So, they're separated. So, it was able to give us a little bit more reliability

there.

And as everyone's aware, the Huntington Beach 3 and 4 units were converted to synchronous condensers to provide additional reactive support.

As prior folks have talked about, about 1,800 megawatts came on line this summer. The plants are all on line. The dates that I've reflected up here are the actual contract dates when Edison takes contract control of those plants. In the meantime those plants, I believe, are fully callable by the CAISO. So, from a reliability perspective they're in service.

We started amping up our demand-side resources, our DSM programs last year. This is a bit of a slow roll, but the advantage of it is that it can start immediately.

So, though it takes time to build, it's a good thing in the sense that it's very flexible in terms of a resource to put on line.

And we've done quite a bit of work on communications and outreach in a number of different languages, with a number of different groups, including micro websites, which we found to be very effective as well.

And, of course, we've worked on Flex Alert with CAISO.

I think we've all probably had a view of the once-through cooled plants. One of the things that I just want to continue to make everyone aware of is while SONGS is out, SONGS is a couple thousand megawatts, there are another 6,000 megawatts of OTC plants.

So, you know, the elephant in the room is still the removal of the OTC. San Onofre was just on top of that.

We were planning, as part of our Southern California Reliability Project that we're working on jointly with SDG&E, we were planning for a 2022 potential for SONGS not to be on line. So, we've taken a good hard look at it, so we had a pretty good sense of where we were.

And then there's been some discussion already of regulatory proceedings. And I do think it's important to step back and take a look at that.

The long-term procurement proceeding, track 1 has already occurred. Track 4, as the PUC discussed, is where we'll be looking specifically at SONGS out.

Testimony's due there late August, I believe. And what that will do is layer on top of the prior decision, which was for once-through cooling, and look at the additional requirements and the integration of SONGS out.

So, potentially, there could be additional resources or an additional resource need found and then we would work to fill that.

The CAISO's transmission planning process is the process by which the different companies and different transmission providers bring projects forward to the CAISO to be considered in an integrated bundle.

That process window opens, I believe, this September and we would anticipate bringing projects into that window, as well.

As I mentioned, the Southern California Reliability Project was a joint effort that was underway with SDG&E. And we were really working in order to be able to look at SONGS out. And in order to get to 2022 we had to consider the OTC plants, already. So, that was already in our thinking.

So, we've really kind of looked through this issue, although we were looking at it as a contingency, so it was a slightly different process.

Recently, with the formation of the Governor's Task Force we have been able to sit with the agencies and with San Diego and really integrate all of our thinking, look at all of the studies, and that's how we'll bring this all together, hopefully, and be able to have a fully baked plan to move forward.

And as I mentioned, track 4 of LTPP, which would be starting in August of this year and, say, ending sometime late this year, early next year, really, I think, is the vehicle that we as the utilities would look at to get our resource plans authorized and get a step forward on what sort of resources we would be out to acquire.

So, just a few pieces of the Southern California Reliability Project, in order to start with the loading order and fully consider preferred resources, we'll be proposing a preferred resource living pilot.

And by living pilot we mean that it really will be iterative. We'll do work, we'll evaluate it, we'll then take that evaluated work and loop back, and use it to acquire additional preferred resources.

We see this as sort of having four key components. First off, we want to try to flatten load growth. There's projected load growth, especially in Orange County and South Orange County and we want to be able to use preferred resources to fully mitigate that load growth so that we don't have to content with it.

And early on Mike Jaske showed some load growth, and those were full system diagrams, of course. But the issue would be let's try to flatten that out and let's use the three preferred resources up front.

Secondly, we want to work with all of the stakeholders to make sure that the preferred resources are, if you will, LCR quality. That they're resources that can be used for local capacity needs.

So, this may mean that it's bundles of resources that have characteristics we need. So that, for instance, they're good for two to four hours, let's say, once they're called. They need to be called within 30 minutes.

We want to do as much work as we can to make these bundles of preferred resources look like what the system needs so that we can work with CAISO and the other entities to be able to dispatch them.

And, obviously, we want to do it as cost effectively as we can.

We also need to take a look at staging this activity. We have a solicitation that will be coming up shortly, that will be part of our LTPP, our long-term procurement plan.

I'm sorry but this is just an acronym stew and you kind of get used to it. Sometimes we don't talk in English at all.

(Laughter)

MR. NELSON: And what we'll do in that upcoming request for offers is we'll go out for preferred

resources and we'll see what the market brings us. These resources will be for delivery in, say, 2020-2021, and we need to recognize that we need to stage those resources.

Because you can bring storage or you can bring a lot of demand programs on with relatively short notice. You don't need to start ramping them up in the same way you would, say, a fossil generation project, or the way you'd have to ramp up a transmission project which would have an even longer lead time.

And then last in the preferred resource pilot we need to make sure that we have good measurement and good evaluation. Because if the pilot is not providing the amount or the type of resources we need, the logical backstop would be generation. It would be a contingent generation.

So, we'll need to evaluate. We'll need to have crisp goals to watch. Because what will be important is that we still have time to put on contingent generation or other generation sources to cover the shortfall, if it were to occur. So it's really that's really insurance.

Secondly in the plan would be L.A. Basin transmission. There's been some discussion of that. These would be projects inside the Basin to move power

around.

We have identified one such project, the Mesa Loop-in and I'll talk about that a little bit more on a next slide.

Regional transmission, CAISO showed some sub-sea cables and some other potentials.

One of the things that we looked at was trying to connect Valley, which is a 500 KB sub that would be out on the 215 around Roma Land with San Onofre. So, just pull 500 straight in.

And that's, you know, a big project. It's probably 60 plus miles. A billion, maybe two billion dollars, I mean it would be a very substantial project.

And we'll sort of show the preliminary results of what that would do. But again, very long lead time, probably a pretty tough project coming through fairly urbanized areas.

Conventional generation, depending on what you have for transmission options you can put your generation in the Basin or outside the Basin, to some extent.

You know, transmission doesn't create generation, it just moves it around. So, what's important is if you can put in the right transmission lines, you can get some flexibility in moving generation

around, but you're very likely to still need to build it.

So, we continue to look at the need for conventional generation in the Basin, both based on the constraints of the transmission in place, potential new transmission projects and then, of course, system reliability.

And the last item here is contingent generation. In order to have the flexibility we need to look to preferred resources as a big part of the portfolio, we need to have insurance behind it in the event we're not successful.

We're going for very, very deep penetrations, new programs, different uses of programs. Conceivably, if you have to call a program 10 times, or 15 times, or 20 times, or 25 times a summer you'll see a lot of fall out.

These are the kinds of things we really, really need to understand better in order to rely on preferred resources as a significant part of the portfolio.

So, we see the Southern California Reliability Project, and especially the living pilot, as components that will allow us to really bring together the maximum amount of preferred resources in a way that is protected, again, by a contingent generation option in

the background.

So a little bit about the Mesa Loop-In, and I don't want to get too technical here because my transmission planners will tell me that I can't get too technical. I'm not capable of it.

(Laughter)

MR. NELSON: So, the Mesa Substation is a 220 KB sub, or 230 KB sub that is about two and a half miles southwest of Edison's headquarters.

It's on the 60 freeway, it's a little bit north of the 60, has a fairly substantial footprint, and it happens to be next to a section of the tri-tip of the Tehachapi renewables line.

So, there would be a 500 KB line coming right past it.

So, one option is to loop in, which basically means rather than have that line go past the Mesa Substation, have it stop. So, have it go into the sub and come back out of the sub.

Well, the first thing that would entail is converting that 220 sub up to 500 KB. So, first you have to make it a bigger sub, so then it would be a 500 to 500 sub as it passed the 500, through a 500 to 220 sub, as it had 220 circuits, and then probably down to 66 for additional through put.

And then while doing that there's the opportunity to loop through some 230 lines that also come through from other subs.

So, if you will, this becomes a power hub and it allows us to move power around inside the L.A. Basin. And by doing that it reduces the amount of generation that we would need to build in the Basin.

Again, we may still need to build generation. We would just have more flexibility in where that generation is built.

And I would anticipate that we would be proposing this in the CAISO's next transmission planning window, which would be this September.

COMMISSIONER MC ALLISTER: Could you give us an idea of just the scale of that project? You know, how many -- well, the line and -- sort of a ball park?

MR. NELSON: You know, I can -- it would fully consume the existing site. I can get that information for you. In fact I have it with me and I can come back later this afternoon, during the discussion, and bring that up.

COMMISSIONER MC ALLISTER: Great.

CHAIRPERSON WEISENMILLER: Well, if you could submit it for the record later, that would be good, too.

MR. NELSON: I can certainly give you some

indicative part for the record.

So, we've run some different scenarios, again, as part of the Southern California reliability. And the first one we looked at was really what if you do everything with generation?

So, if you will kind of the simplest option. You've got a fair amount of once-through cooled plants. They're going out of service. What if they get repowered?

So in looking at that we wind up with a need of around 2,800 megawatts.

Now, bear in mind this is based on modeled output. And essentially what the modelers do is they continue to add generation until things work.

So, you know, presumably at 2,799 it doesn't work. AT 2,800 it does. And at 2,801 it would keep working.

So, these are kind of razor's edge numbers. So they're not -- they're not necessarily the number you'd shoot for, but what they tell you is what's the -- what's the magnitude of the need?

Generation's typically kind of lumpy. You don't build a 1-megawatt unit. You build them in 100s, or 250s, or 500s.

So, typically, the lumpiness in generation would

give you that next part of margin in construction. So, if you say 2,800, it may well be that 3,000, for instance, is a logical number to go after, simply because that's the way the units are.

But I just want to be clear. This is the minimum number. It's not necessarily the target number. That's something that we will continue working through.

In our second scenario here, where we look at some L.A. Basin transmission, this specifically is looking at the Mesa Loop-In.

What it does is it reduces the need for generation and it also splits up the need between in-Basin and out-of-Basin. Because you're capable of moving more power around so you'll be able to basically bring more resources in from the outside to meet the load need.

So in this case the in-Basin need falls to around 1,600. There's another 500-megawatt incremental need from outside the Basin, again of new generation.

And then, presumptively, the rest of this is met with the use of existing generation elsewhere that's simply brought in.

Again, transmission just moves it around. It doesn't actually create any generation.

Looking at the next one over, the regional

transmission, this was the sort of big project that I talked about, that would be sort of Roma Land to SONGS, that 500-KB project.

It's probably not feasible, probably, certainly not in the time window. One can envision these sorts of projects and, you know, ten years is a long time for us and not very long in transmission years.

And so in this case you'd see that you get another, say, 400-megawatt reduction in the amount of in-Basin generation needed, but it doesn't really change the amount of generation overall. You still have to have more generation. You just have a little bit more flexibility in where it goes.

So, while this may not be, you know, the right regional transmission option, you know, we remain committed to working with the CAISO and San Diego to look at, obviously, other potential regional transmission options.

And then the last one is our targeted preferred resources and that's really taking the living pilot fully into account.

In this particular case we're using about 700 megawatts of incremental preferred resources. It's a stretch. There's no question about it, it will take a lot of effort and it's a project that will require us,

again, to work with all of the stakeholders to make sure that we have very well-defined standards as to what these resources are because we need these resources to count because right now we're using them in place of local capacity for reliability purposes.

But again, the value of the living pilot is it allows us the flexibility to get out there and do things, create products that make sense, that meet the needs, and that meet customers' needs as well.

And then test them. And if they work, great, let's go do more. And if they don't work, then let's modify it and let's go back out with a different offering. So, we need flexibility there.

What you'll see is it doesn't change the overall need for resources much. It does in fact have us to have a little bit of -- a little bit of out-of-Basin generation and it reduces the in-Basin generation a little bit more.

So, again, you know, we're fully committed to preferred resources and we're looking for pathways to get there, and we think that the living pilot can be a pathway to get there.

So, moving forward, obviously very aggressive use of preferred resources, especially in South Orange County, that's the closest area to San Onofre. That's

the place where we need to do a lot of work.

We're still committing to a lot of work in the Basin, as well, if we follow this path.

We need to really be able to test the value of these resources for system need for LCR.

We need to have very much a need-based packaging of preferred resources. That may be that it's solar, with some DR, with some storage.

I mean, perhaps that forms a product that makes sense that does what we need it to do.

Those are the sorts of issues we really need to work through.

By 2018 or 2017, perhaps, we would have to really have our first assessment done as to whether or not we're hitting our targets, so that we would understand if it's time to pull the trigger on the contingent generation.

In the meantime we would need to run in parallel to make sure that that's even a possibility because you can't site generation on no notice, either.

We would move forward with a lot of what I would argue would be probably pilots inside the pilots. I've recently, in the last few days, been talking with NREL about potentially some pilot work on solar that would help us understand better how local photovoltaic and

inverters could work on the system.

I just got an e-mail this morning. I sit on the National Science Foundation's Scientific Advisory Board for Solar, and I just got an e-mail this morning that that contract's been renewed with Cal Tech.

And that's -- you know, that's amongst the most fascinating stuff. And I really have to give it to NSF to bring a few folks in from the "real world" because the sorts of things that these guys are working on they're not going to cook for another ten years.

But it's good to be in the room to be able to say let me tell you how it would have to work today, so that they can formulate a little bit better thinking of how to move ahead.

In terms of L.A. Basin transmission we would move forward, hopefully, with our Mesa Loop-In, in the CAISO's transmission planning window.

For the most part that gives us a reduction in in-Basin generation, which provides us with more flexibility. The in-Basin generation would still work but, again, it provides us with more flexibility.

With the exception of what I understand to be a few towers, this is almost exclusively inside existing right-of-way, so that's a good thing.

Regional transmission, obviously, we'll work

with CAISO. And you saw several different things, ranging from your 500 DC lines to offshore cables. So, again, we'll take a good, hard look at all of that.

And then for conventional generation, both the generation that we would move forward with in any case, and contingent generation, we will work with the CPUC to see if we can get that out of track for, if not I think the alternative would be some sort of a special application.

But again, there's a lot of processes here and I agree entirely, I haven't even tried to touch on all of the processes.

Somewhere I've got a slide that's got about 15 agencies on it. And everybody's heads kind of nod when you look at it and say, yeah, that's what it works out to be.

And for Chairman Nichols, I actually had an inlay pop out of the weekend, and I've chosen to come here instead of the dentist.

(Laughter)

MR. NELSON: So, you got that one right. So, thank you very much. And I don't know if we're doing questions now or we want to try to do them together or --

COMMISSIONER MC ALLISTER: I think -- so, I

appreciate your presentation, Mark. And we have about a half-an-hour left and we have two more presentations, SDG&E and then back to the ISO. So, maybe some clarification if anybody has specific questions. No, okay. All right, thanks.

MR. NELSON: Thank you.

MS. KOROSEC: And our next speaker is Will Speer from San Diego Gas & Electric.

MR. SPEER: Hi, good morning everyone. My name's Will Speer. I'm the Director of Transmission Planning for San Diego Gas & Electric.

I would also like to thank everyone for the opportunity to speak today.

I'm going to start with the summer of 2013, which we're all prepared for right now. Right now it looks like SDG&E's expected to meet summer demand, but there could be days when it will be tight and we'll need customers to conserve and demand response.

SDG&E's peak demand this summer is roughly around 4,600, but on an unusually hot day it could go up to around 5,100, which we are prepared to serve if all lines and generation is in service.

In 2012 SDG&E completed the Sunrise Power Link which has greatly increased reliability, allowed renewable generation to develop, and increased Southern

California's ability to import power.

Additionally, SDG&E has completed several transmission projects in preparing for this summer.

The projects we completed were in the Encina Substation we added a 238 and 138 KB transformer, and we've also added capacitors -- I'm sorry -- we've also added capacitors at our Penasquitos Substation.

These projects assisted in voltage support and allow us to move power between our system and SCE's.

Additionally, to improve the reduced congestion and to improve SDG&E's ability and Southern California's ability to move power into the Cal ISO, we installed a capacitor. We actually funded the installation of a capacitor on WAPA system, which is at Kofa Substation.

And then we also did a line reconfiguration in our system, our Sycamore-Carlton Hills, 138 KB.

As Phil had mentioned earlier, the mid-term enhancements were already approved in last year's transmission planning cycle.

These projects were a new 230-KB line from Sycamore to Penasquitos Substation. This project, I think most people are aware, is actually subject to competitive solicitation. So, there were numerous independent developers who bid on this project, along with SDG&E.

I know we're going through the application process right now. We expect a decision from the Cal ISO, hopefully, in the September time frame.

Additionally, there was already reliability projects awarded to SDG&E. And this was the Static VAR compensator in the Orange County area. What we've been looking at is looking at the SONGS Mesa side.

Given the decommissioning of SONGS, there's a significant amount of land available on the mesa that we're hoping to develop the project there.

This project would require a PTC -- at a minimal, a PTC to construct at this time.

The other project, the other significant project is a synchronous condenser at Talega Substation. The good news for this project is it's within our existing substation fence. So, we're actually in the process of going out to bid right now. We have three vendors that are interested in installing this piece of equipment.

So we'll, hopefully, in the next few months have an answer for what project we're going to go with, or what company.

Additionally, as mentioned a few times today, we were recently approved for 343 megawatts for the San Diego LCR area.

This can be met with Escondido, which was

mentioned earlier. And then we've also refilled an amended PPTA for construction of the Pio Pico Power Plant, which is located in Otay Mesa area. It's 3 100-megawatt LMS units. And it actually ties in perfectly to what we were talking about earlier with flexible dispatch, quick start units that can be on when needed.

As Mark had mentioned earlier, too, we've also been engaged in long-term studies with Edison and the ISO, looking at 2022.

And the real issue, I think everybody realizes, SONGS is a key piece of this, but also is the OTC units. That's really the detrimental loss for our system.

Solutions can be a combination of transmission and generation, and that's what we've looked at. We've look at pure generation solutions. We've also looked at generation and transmission, and then purely transmission solutions.

And from right now we cannot solve the issue with purely transmission. There's too much loss of generation. So, we will need generation on the plant.

As mentioned, too, our systems, SCE and SDG&E are pretty well tied together. So, a solution needs to -- optimization of the solution between transmission generation in between San Diego and L.A. is crucial to minimize ratepayer impacts.

The long-term solution that we looked at from a transmission solution is a DC line, which was mentioned earlier. We looked at running a 500-KB DC line from our Imperial Valley Substation to SONGS.

And we also looked at an alternative, running it to our Rainbow site so we'd avoid going through Camp Pendleton.

I'll go through a little of those details later.

The other project that we're looking at right now is a Pendleton Energy Park. We are proposing to develop 1,000 -- or, actually, SDG&E would site 1,000 megawatts of generation on or near Camp Pendleton, Northern San Diego.

The idea being we would have the infrastructure and site in place, and as generation is -- it's determined there's a need for generation through LTPP, whatever, whatever mechanism, then we would go out and bid out those individual chunks. So, you could 100, 200, 300, whatever is needed in the time frame.

Also, as we know, preferred resources EEDR and EG will play a role in determining the need for new generation.

Going back to the DC line, we looked at two solutions. We looked at the conventional DC and we also looked at DC light, which allows it to be undergrounded.

From an environmental perspective that seems like the most ideal solution, but it also is costly. So, we are in the initial stages of investigating this.

What we have found, at 1,500 megawatts we're able to reduce the need of San Diego by 600 to 800 megawatts and L.A. by 400, so almost three combined cycle power plants. But it will take significant permitting and it's costly.

Just to kind of show you the map of what projects we were -- here's the option to get all the way to San Onofre. And we've also included some of the other major projects that have been approved in the plan, which is the Sycamore PQ Line, and then the synchronous condensers at Talega, and the Static Var Compensator at San Onofre.

That's what I have.

COMMISSIONER MC ALLISTER: Thanks. You know, let's wait until the end, I guess. Yeah, let's wait until the end and then we can kind of ask more questions and try to be more efficient with the time.

So, we'll go back to Phil and it looks like we're -- I think you just have a few slides, right? Yeah, so then we may have some minutes here at the end to ask questions.

MR. BERBERICH: Yeah, Phil will be fast.

(Laughter)

MR. PETTINGILL: Yes, I will. Thank you.

We thought what would be really helpful and important here was to just spend a minute and tell you what is happening with The Task Force.

And just to back up a second, this Task Force is really, after the June announcement by Southern California Edison to retire SONGS, the Governor, as we all know, requested that the State agencies get together and develop a plan.

Our primary objective is to try to make sure we are meeting reliability.

And so we have convened that group. And what we are really doing is trying to look at all the issues and potential solutions.

As you can see, there's quite a bit on the table. There's a lot of analysis that's already available, a lot of details that we can pull together. And the objective here is to try to pull together what we do know today, and piece that into a plan that can actually look at, well, what do we do in the short-term, the mid-term and the long-term now that we know that SONGS is going to retire.

And, of course, the notion here is to try to be prepared for a potential briefing with the Governor in

August. We would expect sort of results of this plan coming out probably sometime in mid to late September to be consistent for his call for a plan within 90 days.

So, that's really what the Task Force is and what the objective is.

We've already heard, or you've heard about what is it that's available. What's the analysis that the ISO has, that Edison has, and San Diego and, really, effectively what we're doing is trying to pull that together.

Now, we do have representation from the Water Board, from the South Coast Board, as well, and we're trying to look at what are the implications short, medium and long term in terms of the information and the analysis that we have.

So, our objective, and you've heard all of us say, is what can we do to optimize the use of preferred resources?

Follow that up, then, with transmission fixes. Because as Mark was pointing out, while transmission doesn't necessarily produce the energy, it at least can help us move the stuff around that we do have.

And then, finally, the last piece of this, what we've recognized, is starting to think about and talk about, now, how do we implement that plan in regards to

the various regulatory agencies, and what are the processes, and procedures and steps that we need to take so we can lay out what are the specific milestones and schedule that it would take to try to make sure we've got critical pieces in place at the right points in time.

Okay, so that's the Task Force. Really, on this slide here, I won't go over it, it's going to be redundant from everything you've heard from me, Edison and San Diego.

But all I wanted to do is point out on this particular slide that there are a number of things that are already happening in the short-term horizon, the next few years.

We've already identified some pretty significant things that can and need to happen sort of in that 2018 time frame, and additional items that will need to be discussed and talked about where we go beyond 2022, when we've got the next major milestone of OTC facilities.

Okay, so at this point the way we've scoped the Task Force is to be able to specifically identify what the issues are.

More importantly, we want to be able to look at a mix of solutions, so there probably is no single, exact plan.

But what we're trying to do is identify what are the risks and what are the possible mitigations in order to get the key reliability goals and pieces put in place.

And so then we're going to identify the processes in order to achieve those.

Okay, so that's what we're expecting to come out of this effort with the Task Force. And I'll stop there.

COMMISSIONER MC ALLISTER: I just have a quick question. Actually, it's for SDG&E. So, the ISO and Edison talked quite a bit about how they're going to stimulate preferred resources as part of this overall planning effort, and we've talked a bit about demand response and energy efficiency.

And I guess, you know, there is kind of a need to expand somewhat the definition of infrastructure to include some of this distribution level or disbursed resources. That is also infrastructure of a different sort. Not macro, but more sort of looking towards the future we're going to need more distributed.

I guess, so your presentation was pretty light on the preferred resources front and I want to just make sure that that's in the plan at SDG&E to -- you know, all those options are also on the table.

You sort of -- there's a point that says preferred resources, EE, and DR, and distributed generation will play a role in determining the need for new generation and transmission.

But I kind of what to -- what's the chicken and what's the egg here?

MR. SPEER: They're definitely on the top. Preferred resources are the best solution for everybody. So, we have looked into the loading order. And all our studies, too, are the same, in line with Edison and Cal ISO.

If they can meet our needs, our operational needs, then we're very supportive of that, too.

As far as specific programs, we're in the community, too, trying to look at different programs. We've been involved in identifying what characteristics are needed from demand response, different things like that.

So, we are definitely -- that's number one for us, too.

COMMISSIONER MC ALLISTER: That would be helpful to hear in your written comments and sort of the --

MR. SPEER: Sure, I'll go into a little more detail on that.

COMMISSIONER MC ALLISTER: Great, thanks.

CHAIRPERSON WEISENMILLER: So, I had a couple of questions. The first one I think is for Mark, one for San Diego.

Last time Commissioner McAllister and I were at UCLA was for an AB 758 hearing, which is retrofitting existing buildings.

And so I guess one of the things I want to understand is what is the customer mix in South Orange County that we're targeting? And how much of that is rented versus owner-occupied space, residential or commercial?

MR. NELSON: Yeah, and I don't have that information with me. So, I'd have to go back to our customer service/energy efficiency folks to get a better understanding of that.

CHAIRPERSON WEISENMILLER: Yeah, I mean this is a good opportunity. As I said, we've just gone through some pretty extensive activity trying to deal with these deep -- trying to get existing building retrofit to scale.

And so to the extent that that seems to be part of what we need to do here, both residential and commercial, we'd like to really figure out a way of moving forward that we could really get some targeted programs in that area.

I guess the other question for both of you is, certainly, we've talked about how one of the consequences of San Onofre being out is that your two systems are really interconnected.

And so one of the things that try -- you know, and that there are tradeoffs between putting more resources or more transmission in one or the other service territory.

One thing I wanted to try to understand is the proverbial, in some of the earlier discussions, of where we stand now on the ratings on Sunrise and how that interacts stuff, and some of the sort of load drop issues.

MR. SPEER: Yeah, I can speak to that. So, we did have an original rating of 1,000 megawatts on Sunrise, the path rating.

But what we found with the Cal ISO studies for last summer, actually before we knew SONGS was going away, that rating was actually a limiting element.

So, right now we're able to flow more than 1,000 megawatts. We withdrew the path rating and we're able to flow up to probably 1,160 thermally out at Sunrise.

But the way the systems work with both those lines in parallel we're not seeing that quite yet.

So, with that said, it is about up to 1,160 on

Sunrise.

But I think your question for the load drop, also, that was a big issue. What has changed, when we originally proposed the line there was a criteria that said there was a certain distance between two structures and whether they would be a credible contingency.

CHAIRPERSON WEISENMILLER: Right.

MR. SPEER: And what had happened during -- over the last few years, as the criteria was reduced somewhat and the line spacing was less, so now Sunrise put together do not constitute a credible category C contingency. So, the good news is it's a category D contingency.

So, we have to plan for -- you're allowed to load shed for the loss of both those lines.

So, that's kind of where we're in the process. We haven't really used it, yet, but we're working through it.

CHAIRPERSON WEISENMILLER: And what sort of levels of load shed are you looking at?

MR. SPEER: We have the capability up to 1,000. But then, again, as I say it's for a category D it's an unlikely contingency on both of those lines to go out at once because of the line spacing.

CHAIRPERSON WEISENMILLER: Okay. So, certainly,

in your written comments if you could explore that more.

My recollection is last summer it was like 800?

MR. SPEER: Yeah.

CHAIRPERSON WEISENMILLER: And you've basically upped it to 1,000 now?

MR. SPEER: Yeah, we upped it to 1,000 this year.

CHAIRPERSON WEISENMILLER: And how does that affect Edison as the line rating goes up, but the load drop -- I guess with the load drop the answer is it doesn't.

MR. NELSON: Well, what we'll need to do as part of the planning process is consider how we're going to look at the load shedding as part of planning. That's really an operational activity that you'd load shed due to operations.

So, we'll need to work that through in the planning group.

Back to your prior question or your statement, as well, you know, that whether the generation's in SCE, or SDG&E, or whether it's imported, again, there's some flexibility in how that works.

CHAIRPERSON WEISENMILLER: Yeah.

MR. NELSON: So there really aren't right and wrong answers. So those will be to some extent

commercial decisions and to some extent policy decisions, as well.

CHAIRPERSON WEISENMILLER: Right.

PRESIDENT PEEVEY: Mr. Speer, you speak in your testimony or your comments about a 1,000-megawatt Pendleton Energy Park. This is Camp Pendleton US Marine Corps, I believe.

MR. SPEER: That's the proposal. We are -- there's nothing affirmative about this, yet. We're in negotiations with the base. It's a concept at this point in time, but we figure it meets --

PRESIDENT PEEVEY: Have they shown interest in this?

MR. SPEER: They've shown a few locations that they would support, but we are not anywhere near final negotiations with them. We've met with them numerous times, we've given them a proposal, and we're working through it.

PRESIDENT PEEVEY: Is there anything in writing that you can provide us here, from the Marine Corps, yet?

MR. SPEER: I'll have to check on that. I don't know if we have anything in writing from them.

PRESIDENT PEEVEY: I mean I'm skeptical, let me put it that way. It seems rather tentative.

Having known the history of SONGS and what it took to get the Navy Department, of which the Marine Corps is a part, to lease that land to the Edison Company 50 plus, 60 -- 50 or so years ago, dealing with the military is never an easy situation.

Now, they have an interest in renewable energy, I realize, the 29 Palms and elsewhere.

But I would just like some indication, since you are proposing to site something as large as 1,000 megawatts, some indication to all of us here of the serious of this as demonstrated by evidence from the Marine Corps or the Navy, itself.

MR. SPEER: I understand. And one of the things we had mentioned, too, which actually has the Navy interested is they've -- they're worried about energy security. That's a big issue for the military.

So, we've talked with them about a way to maybe isolate one of the peaking units so they would be able to be supplied during a catastrophic event, so that's one thing they're interested in.

And you mentioned before, too, the renewables. So, maybe there's a way we can tie this power plant -- these peaking plants, and add some solar there, too, so they can meet their renewable goals.

And we have quite a few lease lines on their

land, too, so maybe there's a package we can offer that will be attractive to the military. And that's the approach we've been taking. But I will put some comments in.

PRESIDENT PEEVEY: Okay. I hesitate to ask you this, but I didn't see anything -- any mention here of Encina in your statement.

MR. SPEER: Well, Encina -- I'm sorry.

PRESIDENT PEEVEY: Yeah, Encino, that's a once-through cooling plant.

MR. SPEER: Yes, and we are preparing for the loss of Encina if it were to retire at the compliance date.

But as, you know, mentioned in the other presentations there needs to be significant either generation or transmission introduced before we can reliably serve without Encina in the 2020 time frame. So, yeah, that's a key component to us, also.

PRESIDENT PEEVEY: Well, I mean wouldn't it -- if we could deal with the once-through cooling challenge for Encina isn't it -- I mean it's a bird-in-the-hand then; is it not?

MR. SPEER: If we can deal with the OTC issue and the city -- the City of Carlsbad is another challenge, too, at this time.

PRESIDENT PEEVEY: Okay, thank you.

COMMISSIONER FLORIO: Yes, I think mostly for Edison, but possibly SDG&E, as well. It seems like with this geographically concentrated issue in Orange County there's really a potential for significant community involvement in kind of a campaign.

I mean I'm from Northern California, but I've spent some time in Orange County recently, and I can't imagine the people there are going to be very eager to have generation or major transmission.

And it seems like there's a way to rally the community behind making some of these alternative and preferred resources work.

And are you looking at partnering with cities and community organizations to try to get that kind of community effort together?

MR. NELSON: We're still working through what the pilot would entail. But one of the things I think that's becoming more and more clear, and we're talking to the cities constantly through outreach, is that this is a series of tradeoffs between generation, transmission and preferred resources.

And I agree with you, to the extent that that's better understood I think that that will put more flame behind preferred resources, behind DR, behind energy

efficiency, behind distributed generation and storage.

And again, to the extent that that's better understood, and we've been getting the message out over the last couple of years as we've had summers without San Onofre, and we've had to really get into more detailed discussions about demand response and energy efficiency.

So, I think that's a very good idea, but we really are still working through what the pilot will look like.

COMMISSIONER FLORIO: Yeah, I was just thinking if there was a way to generate the same kind of community spirit that arose in Chino Hills, in Orange County, behind alternative resources that would be a wonderful thing.

But it's harder to get people to be for things than against things, I guess. But, you know, there's really a huge opportunity here to create, you know, a new energy model for the country and the world.

And I think that community, as much as any in the State, would be a place for that to happen.

PRESIDENT PEEVEY: Apparently, it wasn't totally satisfactory in moving you, Mr. Florio.

(Laughter)

CHAIRPERSON NICHOLS: Well, you know, this is an

observation, really, not a question. But we're going to be talking later this afternoon about 1318 and about the report that was requested by the Legislature. And which, as everyone knows, has been significantly delayed.

And one of the things I think we learned as a result of entering into this process and where we are now is that there's a very large disconnect between reliability, as it's defined for legal purposes, and reliability as it's defined operationally, and on a day-to-day basis.

Not to say that we should be looking to put everybody on pins and needles all the time and, you know, make life insecure for folks.

But the reality is that we plan in a certain way, based on requirements for very significant assurances because our society doesn't want to take risks with the possibility that we might lose electricity at any kind of a critical moment.

But when you then go out to the community and say based on that you need to accept the need to have a large line running through your city, or your backyard, or your reservation, or your park. Or, you know, a large facility that not only costs money, that turns up in your rates, but also is going to be a visible

facility in your community for years to come.

We don't -- people don't come together around that and there really is no forum. 1318 sort of attempted to address that issue with respect to air quality. Because in this part of the world that is the one major constraint that everybody accepts is real.

But as we look at it and sort of try to convince ourselves or others as to, you know, precise numbers and locations of where new facilities are going to be needed there's always some tradeoff. There's always some other way you could solve the problem if you just did this, this or that.

And all of them, as Commissioner Florio was noting before, require major investments. Not just of money, but of political capital on the part of the people who end up promoting those facilities.

I'm not urging us to do anything in particular at this moment, other than to find a better way to articulate that.

Because I just don't think you can ever really garner the kind of support that we'd like to have for any type of new construction.

And as we all know, we don't live in a world where people sit still and just accept these things coming in.

So, it's on all of us.

COMMISSIONER MC ALLISTER: Yeah, I refer to it as our robust democracy here in California, which is a good thing. It means that we're all accountable for what we do.

I guess I want to just reinforce what Commissioner Florio said and what Chairman Nichols touched on.

It really is incumbent upon all of us, but certainly the utilities that serve these areas to cogently develop and express to the communities a vision of what alternatives actually look like in practice.

And not sort of, necessarily, go out into the communities with something fully baked. You know, here's what's going to happen, just get on board.

But actually interact with the communities and do the hard analysis of -- as Chair Weisenmiller was referring to, do the hard analysis of what the loads actually look like, how many commercial buildings, you know, in Southern Orange County. You're talking residential and commercial, basically.

And what the various opportunities are there and how -- you know, if we're talking in cold, hard cash about options, you know, you can invest that in a number of different ways.

A lot of it -- you know, often we assume that's in steel in the ground, but that can be in all sorts of things, including community engagement, and working out programmatic solutions, and installing technology in a very localized level.

So, I think the sort of tradeoff -- what we don't understand, nearly as well as we need to, and we collectively, is how to compare, you know, the similar fruit to similar fruit. Maybe not exactly apples to apples, what those small-scale demand side or distributed options look like when you roll them up into some overall macro solutions versus some of these large infrastructure for the similar problems.

Those are really -- I think we're not quite able to connect the dots between the two or to match them up, to map one over to the other to see where the tradeoffs are.

And that's kind of the hard work that I see us doing when we talk about demand response, within the IEPR, and that we're having a nice robust discussion in this discussion here, as well.

I think those are some of the issues that I think we're all tuning into and that we've really got to sit down and write out what we really mean, and what we really think they are, and see how much agreement there

is.

VICE-CHAIR SPIVY-WEBER: I have a question. This is for Phil.

Who, in ISO, when you start in September on your kind of next plan, who will be overseeing the water component?

As you mentioned, there will be a larger water component than there has in the past. There probably hasn't been one in the past. But there certainly will be a larger one in the future.

So, who in your operation is in charge of that?

MR. PETTINGILL: Well, our director for planning, our Executive Director for Planning is Neil Millar. He was unable to be here today and so, really, it falls under Neil's area of responsibility.

But one of the things he'll be looking for is who are those folks? And we may want to reach out to you and find out who are those folks that we ought to engage with and talk with. So, we can understand what flexibility they have and we can have that two-way conversation in terms of what does it mean to us operationally, so we can incorporate that.

Again, I'll just back up and say as a general matter, the way our transmission planning process works is sort of the way I walked through the description

today.

Looking at the infrastructure, looking at the load forecast, identifying what the needs are and then talking with folks to say what resources or what characteristics do they have that can help us solve those needs?

And so that's the engagement that we would have sort of beyond the September horizon, working with water folks to help us understand how they could help us meet the requirements.

VICE-CHAIR SPIVY-WEBER: And I would basically ask both the SCE and the SDG&E that in the meeting that we had in Orange County, that the Governor pulled together and there were a lot of different groups there, SCE was there, SDG&E were there. And it appeared to me -- this was in, I'm going to say May, anyway, recently.

It appeared to me that it was the first time that the water agencies had really engaged in thinking through what they might be able to do to help.

And very quickly, it was like a light bulb going off in the room, suddenly the power folks realized that the water folks are engineers, too --

(Laughter)

VICE-CHAIR SPIVY-WEBER: -- and they actually do

understand their systems very well, and they actually are reliable partners.

But they have been -- they haven't been asked and they haven't volunteered. They probably aren't going to volunteer, but they will if asked.

And so I urge that you not have a meeting about alternatives and possibilities without at least someone in the room. And if you need some suggestions of who, I have that list of people who were there and they're great. So thank you.

MR. BERBERICH: Let me just make this quick comment. And I think Mohsen then has something to day and I'm going to make sure he gets his say.

Phil, check me if I'm wrong, but about 25 percent of our load is water pumping.

And we have attempted, and perhaps we need to work a little closer with the Water Board, but with DWR in particular -- not DWR, but the -- yeah, the water, DWR. I was thinking DWP, sorry.

(Laughter)

MR. BERBERICH: DWR, I mean we -- that 25 percent of our load is a natural demand response resource and could very much help offset generation that we need and other things that we need on the system if we could use them in harmony with the electrical system,

particularly with the intermittents that we have on the system now, too.

So, we'll continue that outreach, but we would look for particular DWR, with their pumps, to be part of this, too.

They have -- for what it's worth, they have -- if they were to swap those pumps for variable speed pumps, which is a very costly investment, I understand, but it is something that would save the State money from a cost perspective and also would help us with intermittent renewables.

Mohsen.

MR. NAZEMI: Yeah, thank you, Steve.

I wanted to just, maybe a question for Phil and Mark but also, potentially, for the afternoon session on AB 1318 analysis, and for LADWP. I kind of want to broaden the discussion a little more beyond just loss of SONGS.

And when we talk about uncertainties, in particular looking at load forecasts and growth projections, I think we've been kind of lucky in the last few years with both temperature and -- I wouldn't call it lucky, but downturn in economy. But now it looks like we're turning the corner, the economy is picking up.

And also, there are other factors that come into the picture. I mean ARB's shore power regulations, there is, you know, an abundance of growth in electrical vehicles, and also there are a lot of air quality plans that at least calls for cleaner fuels, such as electrification or alternative fuels that meet the same standards.

And so my question is when we look at these load forecasts and growth projections how much of that is being taken into consideration?

Because I'm hearing a lot about what happens if SONGS is lost, and what do we replace it with, or once-through cooling is lost what do we replace it with?

But I'm not confident, at least from knowledge, what factor is being taken into consideration for the load growth?

MR. PETTINGILL: Well, I'll start off, Mohsen, just by saying one of the things we do is we work very closely with the CEC, and so Mike might have some comments here, in terms of doing the forecast.

You mentioned electric vehicles. I'll just call that out and say, clearly, all of us, I think, are trying to get our arms around what is the expected load growth that we'll have from electric vehicles.

You and I have talked in the past about your

efforts to electrify in your air district, and so I think all of those are variables.

But we need to continue to focus on those things that are actually, potentially, going to drive the load forecast to go faster than what we've seen, you know, historically, when we're trying to project.

So, Mark or Mike comment?

CHAIRPERSON WEISENMILLER: Yeah, I was going to actually hit that and, you know, just to say when we do our forecast, and I've been doing forecasts for decades, this is one of the most difficult times to do a forecast.

And when you look at it, we tend to have not just an expected case, but also to look at a low case and a high case.

And, certainly, one of the key drivers is the economy. And particularly trying to figure out what's going on in the economy over time, you know, what sort of snap back or growth do we have?

But when you look, certainly in 2008 there was a major drop in all sales, and in our air emissions and in our greenhouse gas emissions.

But not only do you have the economy, but also as we look at various technologies, either electric vehicles -- and certainly one of the things that we have

in our forecast, we work closely with the Air Board again to say what is the expected electrification, but also what's the low case and high case there, and similarly, on energy efficiency.

Again, one of the things that's certainly in our base case, we have a strong component of energy efficiency. We also look at how much more we could have, or how much more DG could we have.

It's looking at all those pieces and trying to come up with a range. Now, having said that, we all know there's a range in uncertainty around that.

The reality is, for going forward, at some point you have to really decide what the number is that you're going to plan for and that gets back to this expected case.

But again, most forecasts inevitably are not correct, but you're higher or lower over time, particularly looking out at a longer term.

The other things we're trying to do this year, which really complicates it for all of us, is we're trying to do more disaggregation forecasts.

So, not just saying Southern California Edison forecast, but also what's within the various climate zones, inland, coastal, what's the load forecast there, which means that just as we're talking about doing a lot

more targeting of energy efficiency or electrification, we also have to target the break out of those by climate zones.

And so, again, that's really pushing a lot of the areas in a new state of the art.

What didn't I hit, Mike?

MR. JASKE: The one thing that I'll just add to that is that Energy Commission staff has been attempting to quantify the impacts of port electrification and build that into the forecast.

It's probably the control measures in AQMP that was last adopted, last fall that need the most work at this point.

And at least as I understood the AQMP at the point the Board dealt with it, it's pretty unclear exactly how to translate those general directions into specifics. And that's where maybe some cooperative work between our two agencies would build a better base for understanding those impacts.

MR. NELSON: I have just one comment I'd like to make is there's probably two different ways to look at this, also.

You know, the scenarios of high electrification and low electrification I think are very important and they're things that we do look at.

But also, when we bring on transportation electrification load, we're going to need to be very careful to be able to control it, to be able to incent it to occur when we want it to occur.

Again, I think earlier on we talked a little bit about the chart unnamed that, potentially, instead of the big dip could have some transportation electrification during that period in order to mitigate those sharp ramps.

So, even if large TE loads occur, it's going to be really incumbent on us, both through technology and through behavior to be able to control it so that it doesn't occur in sort of a -- you know, everybody comes home at 7:00 at night and charge is fashion, and just exacerbates that steep ramp.

CHAIRPERSON WEISENMILLER: Yeah, and I would say, also, obviously, we talk about how Edison and San Diego are really interconnected. Obviously, both are really pushing electrification, too. So, one of the things we're struggle with is we're trying to translate Mary's ZEV forecast as what's the spread between San Diego and Edison, say.

COMMISSIONER FLORIO: Another thing that these different changing load shapes raise is communicating these changes to customers.

I'm thinking just a few years ago, in thinking about electric vehicles it was don't charge during the day, charge at night, and we were very worried about that.

And now, in a few short years it's turned around and we may actually want people to charge during the day, which has implications for rate structures and all kinds of other things, and I think just highlights the difficulty of trying to plan in a period of rapid technological change.

And, you know, we live in interesting times, but that's a curse as well as a blessing.

COMMISSIONER MC ALLISTER: Any other questions from the dais?

All right, so we are almost on time. I think that's an incredible feat, actually, we've all accomplished.

So, thank you to Suzanne for putting together a tight agenda, and we'll pass it back to you for the logistics.

MS. KOROSEC: All right, we're going to be breaking now for a one hour and 15 minute -- well, actually, one hour and 5-minute lunch. We'll be coming back here at 1:15.

And again, there's a map and a list of

restaurants on the table with the handouts in the lobby.

(Off the record for the lunch recess at 12:10 p.m.)

(Resume at 1:25 p.m.)

MS. KOROSEC: All right, our first speaker for this afternoon is Mr. Mike Tollstrup from the Air Resources Board.

COMMISSIONER MC ALLISTER: And just for your information, then other representatives from the other agencies will be filtering in after lunch.

We wanted to get started since we have a lot on the agenda and we're trying to cover a lot of ground this afternoon.

So, we will get moving with the presentations and have the other representatives up here as they show. Thanks.

MR. TOLLSTRUP: Okay, Commissioner McAllister and esteemed members of the panel, thank you for having us here today.

I'm going to talk about the 1318 project, kind of give an overview of where we are, kind of a status update and what the process is for. We hoped we'd have results today, but we weren't able to get the report moving fast enough so that will have to come at a later time.

But we will provide kind of an overview of where we are, where we're going, and then some -- we're going to have both ISO and LADWP provide some background on this, some of the analyses that went into the report.

So, just as background, AB 1318 actually required the ARB to do two things. The first was to determine capacity needs in the South Coast to meet long-term grid reliability.

The second part of that is after we've identified that then we had to come up with a solution, or work with the District and others to come up with a solution to make sure that we could get the necessary permits to get the metal on the ground, so to speak, and get the facilities up and operating. And then report those findings to the Legislature and the Governor.

So, 1318 didn't provide a lot of direction on what the scope of the project was so we had to define what it was. Basically, it said for L.A. Basin we had to do this study.

What we did was we came up with a ten-year horizon. That's about as far out as the tools allowed us to go. So the study goes out to 2021-2022, that time frame.

We, in determining what the analyses or the inputs into the modeling runs would include, State-

mandated programs, such as the 33 percent renewable, that's accounted for and other programs.

And then other programs, such as demand side management, we kind of moved those around to provide some kind of bookends in our analysis, in the report to provide that range of what could potentially happen.

We also looked at how much of the OTC capacity or the once-through cooling capacity has to be repowered in order to satisfy the local requirements, and then additional fossil capacity in order to support the increasing renewables that's coming on line over the next ten years.

And then also looking at the offset gap where we need extra generation. To the extent the District doesn't have programs to provide it, work with the District and others to find that mechanism to move some of these things forward.

So, just as some background, we've actually had three workshops. We've gone through the scope of the analysis and kind of what the process forward is.

We did it once back in 2011. Well, actually, we did it twice in 2011 and then in 2012 at the last -- at one of the IEPR workshops, as well.

And then since that time we've been finishing up the flow studies, and taking those results, and working

with the other agencies to come up with a draft report, which we do have now.

So, there have been a number of challenges as we've moved this project forward. You know, it has required a high level of interagency cooperation and coordination. Even though ARB was charged with, you know, kind of spearheading this thing and keeping this thing going, the majority, if not all of the analysis was done by ISO, and PUC, and the Energy Commission. So, we've had to rely heavily on the other energy agencies and also LADWP for their portion of the balancing authority.

So, one of the things that made this thing probably the most difficult is if you look at what's gone on over the last few years that impacts energy as you look into the future, you've got the air quality requirements, you've got climate, you've got the once-through cooling requirements. All of those things basically add considerable uncertainty to the process as we move forward.

And that's part of the difficulty that we've had to deal with in coming up with this analysis and, you know, presenting the results in some fashion that made sense.

And then once we got all the studies done, and

we were ready to go, then SONGS went offline, so we had 2,000 megawatts that we had to deal with, and we had to go back and do additional analyses to support the study.

It didn't make sense to go forward with what we had knowing that SONGS was down and wasn't coming back up.

So, to this date, like I said, we have a draft report and it's based on a series of analyses that were done through Cal ISO and LADWP.

There were five studies that were done that deal with the L.A. Basin with SONGS online. Then there was an additional three studies that included L.A. and included San Diego with SONGS retired, so that was the additional analyses that needed to be done.

We had three studies that were done for renewables integration to handle the increasing renewables that's coming on line.

And then two studies for local generation needs in the LADWP Balancing Authority.

So, as I mentioned we have a draft report that's circulating through the energy agencies right now for review and comment.

As far as the time frame goes, we expect that we'll release the report for public review probably within the next couple of weeks, so we're shooting for

around the 1st of August.

We'd like to give folks a couple of weeks to look over the study and the analyses, come up with questions and comments, and then we plan to have a public workshop sometime in August.

And then, hopefully, providing that all goes well and we incorporate the comments, then we would have a report to the Governor sometime early fall.

So, that's the schedule at this point in time. It's moving forward, we actually have a draft report at this point in time. Hopefully, nothing else will go offline that will affect the studies.

This is where you can go to get additional information, the website. We will post the report to our website. We'll also work with the other agencies to get the links to their sites, as well.

And there is a list serve you can sign up for to make sure you get notices of the work that's coming out and then, also, when the workshop is made available.

So with that, that summarizes my presentation. And are we doing questions or are we going to go right to -- okay.

COMMISSIONER MC ALLISTER: Great, thank you very much.

Are there any questions from the dais?

CHAIRPERSON WEISENMILLER: No.

COMMISSIONER MC ALLISTER: No, okay. All right, thanks very much.

MR. TOLLSTRUP: All right, thank you.

COMMISSIONER MC ALLISTER: All right.

MS. KOROSEC: Next we have Dennis Peters from the California ISO.

MR. PETERS: Good afternoon, Commissioner McAllister, esteemed members of the panel, ladies and gentlemen.

I'm Dennis Peters with the California ISO and I'll be presenting a summary of the analysis that we conducted for local capacity requirements, as well as renewable integration needs as a part of the AB 1318 study.

And I guess before I get into talking about those studies, I'd just echo something that Mike said in his comments, just previously. This has been quite a collaboration of a number of agencies.

The CEC, PUC and ISO have essentially been working together as far back as 2008, where we started working with the Water Board in developing the once-through cooling policy. And that involved in once the AB 1318 requirement came out a working team that also brought in the Air Resources Board and conducted quite a

body of work over the past several years, so quite a bit of collaboration of State agencies, along with the ISO.

So, I'm going to first talk about the local capacity analyses that we conducted, quite a body of work here.

Mike mentioned that there were a number of studies done with SONGS on line and there were studies that were done off line.

And I won't go into -- I hope everyone understands, after some of the discussions this morning, what a local capacity area is.

For the SONGS on line studies that we did, really in the time frame of 2011 to 2012, those are primarily focused on the L.A. Basin because that's the focus of the AB 1318, the South Coast Air Basin.

And, of course, with SONGS off line that -- the interplay that you've heard about with the San Diego area, the studies there focused on both local capacity areas.

So, as Mike mentioned, you know, the on line studies were done with varying RPS portfolios. I don't think I'll go through all the details of what those are. These are essentially renewable resource portfolios that are supplied to us by the PUC and the CEC. We did five of those studies.

And then with the SONGS outage then we began to focus on SONGS off line studies.

And the base case for that was done with a commercial interest portfolio.

We also did a sensitivity study that looked at a high distributed generation portfolio.

And, finally, we took the base commercial interest portfolio and did a sensitivity study that looked at adding incremental energy efficiency, demand response and combined heat and power.

So, you heard Mike mention the high bookend, the low bookend. You wonder how we came up with those. We didn't know what those were at the beginning.

As we did the studies we saw which required the -- resulted in the highest needs and which resulted in the lowest needs, and that's how we came up with the high and low bookend.

So for the purposes of this workshop, this discussion I'm just going to focus on the input assumptions and the results of the high and low bookend.

So, this, I think you saw this map earlier today. I think Noushin had that in her presentation. It really shows you sort of the layout in Southern California in terms of local capacity areas. Three, the Los Angeles Basin, San Diego, and Big Creek Ventura.

And for the studies that we did in the SONGS off line case, essentially all of the once-through cooling that you see on this map was considered off line by 2022. So, again, these are ISO studies so it doesn't include the 2,200 megawatts or so of LADWP once-through cooling generation.

So this table and I know there's a lot here, this gets to what the common assumptions were for both the high bookend case and the low bookend.

So in both cases what we looked at as far as a base case was a commercial interest portfolio for RPS.

I know Mohsen had some questions about demand forecast and what we used there. We used a 1 in 10 summer peak load forecast from the CEC's 2022 adopted mid-case load forecast.

You can see the numbers there for the L.A. Basin and San Diego.

In terms of committed energy efficiency there was an increase of 8,000 megawatts of energy efficiency embedded in the forecast. There's actually a total then, by 2022, of 17,000 plus megawatts.

Some of the other assumptions we made, the mitigation that was talked about in a couple of presentations this morning for 2013, for SONGS out, those mitigations were included in the studies.

We also included modeling the new resources, over 1,800 megawatts of new resources that came on line in the L.A. Basin this year.

And essentially all of the OTC generation was modeled off line.

So then we take the kind of common assumptions that were for both cases and then for the low bookend we included incremental amounts of energy efficiency, combined heat and power, and demand response.

And where do those assumptions come from? Well, for the energy efficiency assumptions, the group agreed to utilize the 2012 IEPR incremental energy efficiency numbers. That's a total of 1,160 megawatts.

For the Edison number, out of the 973 megawatts 751 were within the L.A. Basin.

For the combined heat and power we relied upon input from the IOUs to identify those projects.

And then, finally, for demand response we basically utilized verification of programs that could respond or be dispatched within 30 minutes.

And essentially, the aggregated amount between the two areas, 407 megawatts, is consistent with the aggregate total that came out of the 2012 LTPP track 1 decision, as well as the San Diego Gas and Electric Power Purchase tolling agreement decision in 2012.

Then we get to the results of these two bookend studies. The first one should look familiar to you. It was discussed in this morning's presentation, in Phil Pettingill's presentation.

Again, I'll emphasize, as Phil did, that this is just one set of alternatives. This is essentially the same alternative that was the high case in our transition plan for 2012-13.

So, what we see, and I'll just go kind of to the end point, a total generation need in the L.A. Basin of 4,315 to 4,615 and in San Diego 1,120 megawatts.

And the range you see there for the 4,300 to 4,600 megawatts is really dependent upon the amount of additional reactive support that's installed in the area.

And so for additional, that range might look backwards to you, 1,000 to 500, but the higher amount of dynamic reactive support we can get away with less amount of megawatts.

So then looking at the low bookend, what you see there is that with the incremental energy efficiency demand response and CHP, you see in the L.A. Basin about 1,000 megawatts reduction in terms of the total generation, and about 300 megawatts reduction in San Diego.

That's a summary of the local capacity requirement analyses that we did.

So, I'm going to move now to renewable integration analyses that we completed.

So, the ISO's been conducting renewable integration studies for a number of years. And more formally, as part of the 2010 LTPP and we did it as a part of this AB 1318 work, and also it's a part of the 2012 LTPP.

This graphic here just sort of shows you how those studies are done. You know, we start with the renewable portfolios. We develop profiles, including variable resources, and wind, and solar profiles.

We build a model and define what the flexibility requirements are. Then we conduct a cost production simulation which identifies any shortages we have in the system and any infrastructure needs.

So, again, this model is actually called Plexos. It's a production cost simulation model. And in terms of the analyses that we did for AB 1318, what we did was -- it was actually a system wide study for ISO system wide needs. We determined the incremental amount of flexible capacity needed.

And as well it helps inform the ARB in determining air emissions with the new resources by

providing some performance profiles in the L.A. Basin.

So I know there's a lot on this slide and I'll try to keep it as simple as I can here.

So, we started with the base case, which was done in the 2010 CPUC LTPP. And that was the case through all four cases we did.

Mike mentioned we did three different studies, and so that's case 2, 3 and 4 as you're looking at this table.

In all cases the load was the same, 29 peak forecast plus 10 percent.

And so as you go across the -- the first case we did was what we called new local capacity, which had to do with the studies we did in our 2011-2012 transmission planning process.

Mike mentioned this. Mike Jaske mentioned it this morning, in terms of a 10-year local capacity requirement study for replacement of once-through cooling generation.

And so what was added into the base case, where these amounts that you see below for the L.A. Basin, Big Creek Ventura and San Diego local capacity areas.

So that 3,173 megawatts of generation was added in and it was all considered as flexible, most of it being combined cycle, and then some gas turbines.

And as a result it shows a shortage ISO system wide of 1,251 megawatts.

We then did a sensitivity analysis on that case, so going from case 2 to case 3. The difference there was a reduction of the amount of demand response.

So, if you take a look at the amount that was reduced and the amount of need that increased, it was essentially a 1 megawatt from 1 megawatt difference. So, 1 megawatt reduction in demand response was a 1 megawatt increase in the shortage of flexible capacity system wide.

So, finally, the case 4, which is the one of most interest here I think for this workshop is the SONGS outage.

So, we essentially took the same, for Big Creek Ventura, which that's based on once-through cooling retirements, that amount of megawatts was put in there as far as need.

The 4,615 and the 920 those, again, are those numbers from one of the alternatives that we studied in the nuclear replacement, backup studies in our transmission plan.

We end up then adding close to 6,000 megawatts of new resources.

You'll see a significant drop in the amount of

demand response and I'll explain that. The team decided that in terms of demand response for the renewable integration study that what we should do is try to be as close as possible to demand response numbers we used in local capacity studies.

And so that 826 is a combination of the 400 or so megawatts that were the aggregate of San Diego and L.A. with an additional 453 megawatts for the PG&E area.

So, recall again that this is a system wide study.

And what we found when we ran that renewable integration analysis was a need for 4,870 megawatts, and that's system wide.

So, in terms of next steps, AB 1318 analyses, they really provide a base for developing a more comprehensive solution, as is being considered by the task force, which has been talked about quite a bit this morning, solutions that include additional preferred resources and transmission solutions.

The renewable integration studies that we conducted considered that all of that additional capacity was 100 percent flexible.

So, in terms of the 4,870 shortfall for the system wide, for the ISO, it's definitely desirable to locate some of that in the south, about 26, some in

Northern California.

We did not do a study that defined exactly where that needs to be as far as location, but definitely desirable for the generation in L.A. Basin and San Diego to be flexible, any new generation.

Okay, does anyone have any questions?

CHAIRPERSON WEISENMILLER: We'll wait until all presentations.

MR. PETERS: Okay.

MS. KOROSEC: And our final speaker in this section is Randy Howard from Los Angeles Department of Water and Power.

MR. HOWARD: Thank you and good afternoon. Welcome to Los Angeles. We're glad that we could be the host utility. But, unfortunately, we don't actually serve a lot of the power that is powering the lights right here.

UCLA has a very large cogen plant. They do burn some methane from a local landfill, as well, and they have one of the largest thermal energy storage systems in California. So, most of this is being served by the campus, itself.

So, I'm Randy Howard. I'm the Director of Power System Planning and Development for Los Angeles Department of Water and Power.

I'm going to go over some of the AB 1318 studies. We did very similar studies. We tried to duplicate what was done by the Cal ISO. So, I'm not going to go into the method of the studies, but some of the results, and then talk about how we're implementing some of the measures to take care of some of the needs.

For those that don't know, we remain to be a vertically integrated utility, maintaining both generation, transmission and distribution.

Our center of load is just in the City of Los Angeles and parts of the Owens Valley, from Bishop area south to almost Ridgecrest.

We have four large generating stations within the Basin and we must import power to meet our obligations.

So, our analysis of Assembly Bill 1318, we do experience shortages currently with generation inside our local reliability area. That means we do need to import.

And we do plan on replacing all of our once-through cooling units. I will show you our schedule, our proposed schedule of doing so. We plan on replacing all of them with dry cooling.

We plan on maintaining our current capacity at all of the existing plants and not adding any additional

capacity at any of those facilities.

Our studies show that we will have a shortfall of 130 to 360 megawatts of generation inside our local reliability area by 2021. That will depend a little bit on some of our demand side management assumptions and I'll go into a little bit more detail there.

And we are looking at various methods to make up that shortfall and I'll also discuss some of those details.

Mike Jaske really tried to get me to offer up a slide on San Onofre, so this is my San Onofre slide.

(Laughter)

MR. HOWARD: So, both LADWP and Edison connect through a 500 KV grid. But the 500 KV lines into Edison's area are a bottleneck, so those are out of Lugo. So, we have an interconnection from Victorville to Lugo.

One of the potential solutions that's been considered to look at would be increased capacity coming down the Pacific DC intertie through the DWP Edison 230 KV bus at Sylmar.

One of the issues there, though, is that 230 KV system has a very high impedance. And so the more that comes down that line to go to Edison, we find that only about 35 percent of it actually goes over the 230 KV

system. The rest goes across our system, back out the 500 KV system into Lugo, and it just adds to the congestion.

So, you know, one thing you're hearing today is you're hearing about capacity of lines, building new lines. The flow is really what we need to concern ourselves with. How will the power flow? What are the studies that are being done to ensure that the flow patterns don't interfere with each other.

So it might solve some of Edison's issues, but then it might create overloads for LADWP.

So, Mike, that was your slide.

The study also found that there was substantial demand reduction needed by 2021 in order to remove all of the reliability risk if we're not going to build any new generation capacity within the Basin.

So, we are looking at a demand reduction of about 636 megawatts that we studied, and we indicate that about 2.7 megawatts of load reduction corresponds to 1 megawatt of actual exposure to load shed.

And that really comes down to you can have a demand response program, but there's a recognition that you're not going to load shed everybody at the same time. You're going to rotate it. You're going to have some customers not able to do it or they're not going

to, depending on the type of program they're not going to respond when you need it.

So, we have outlined an estimate of 700 to 1,000 megawatts of demand reduction that we would need by 2021.

We can solve some of that, just like the ISO had indicated, with some transmission upgrades on our system.

So what are we doing about it? How are we addressing it in L.A.'s territory?

Well, over the next 15 years we are replacing 70 percent of our power supply and I'll go over some of that detail, due to a number of environmental initiatives and compliance issues.

So, reliability will remain the priority throughout that transformation.

Some of the transformation, as all of the utilities have the responsibility for 33 percent RPS by 2020, we also have the coal replacement issue. We have put forth a plan to replace entirely our two coal power plants.

The first one is the Navajo Generating Station by 2015 and then the Intermountain Power Project by 2025.

We are going to rebuild all the coastal plants.

We have the same integration issues that others are dealing with relating to renewables and our expansion of demand response.

Currently, our demand response plants are 200 megawatts by 2020, 500 megawatts by 2025, and then the expansion of both energy efficiency and distributed generation.

Some of the other parts of our transformation are to upgrade the Pacific DC intertie. That's an aging transmission system. It's 3,100 megawatts going from the Pacific Northwest into Southern California. A lot of the equipment is old, needs to be upgraded, replaced.

It's a joint project with Bonneville Power Administration and so we have a number of key initiatives.

And for almost an entire year, in 2015, that line will have limited capacity, so it's like shutting down two of the lanes on the 405 freeway for a whole year. And that's -- we're all going to have to deal with that in 2015 to upgrade that and have a more reliable system.

We also upgraded the IPP DC line. We're building a new transmission line from Mojave, the Bear Ridge transmission project. That will be our project to directly tie renewables into pump storage. We have a

1,200 megawatt pump storage system at Castaic. We will directly tie our renewables into pump storage.

And then similar to some of the other speakers, we have a number of voltage support program reinforcements that we're installing to ensure that we can move the power flow.

Some of our transformation elements, 10 percent energy efficiency decrease on our system by 2020. We have the RPS targets and elimination of coal, as I've already mentioned.

What have we accomplished? We did meet 20 percent in 2010. We now have a record investment in energy efficiency, a little over $200 million this year. We have now completed, as of June, the replacement or elimination of once-through cooling at our Haynes units 5 and 6.

We now have on line for the summer six new Ellis 100s quick start units. So we now have 900 megawatts of quick start units for renewable integration available to us.

And we have also launched our feed-in tariff program, 150 megawatts. The first 100 megawatts are just the fixed price program. We had an initial offering of 20 megawatts almost six months ago. We just offered another 20 last week.

And we have an innovative 50-megawatt program that ties feed-in tariff with large scale solar. So, for every 50 megawatts of large scale solar, the developers have to build 15 megawatts of feed-in tariff within the city.

So, that's quite an innovative program. The RFP for that was issued about two weeks ago and so we're looking forward to seeing the proposals on that program. And that's part of our distributed generation expansion.

We've built several solar projects ourselves, and also contracted for almost 500 megawatts of additional.

This just shows our RPS resource mix. As you can see, we've significant expansion in our solar procurement and development.

Our next phases are heavy into geothermal as we replace our coal plants. And you can see the energy efficiency saving targets that we're trying to achieve in order to reduce the load in the Basin.

This is our schedule for the OTC, 9 generating units, 3 coastal power plants. As mentioned, our Haynes units are now completed. We're midway on our Scattergood construction to replace Scattergood unit 3 that's located down by LAX Airport. And you can see the schedule goes out, tentatively, out through 2029 to

eliminate all once-through cooling within our system.

Coal transformation, as mentioned by the Commissioner, for preferred loading order that is our requirement that is the way we're approaching it. So, first and foremost, as we divest of our Navajo coal plant by 2015 is energy efficiency, then renewables, and then as necessary the backup for natural gas combined cycle.

We are in negotiations to sell the coal plant and are almost completing negotiations to procure a new combined cycle for replacement.

Dependable capacity, this is what reliability is all about, having that dependable capacity.

You can talk about all the preferred resources, but if they don't actually provide you the capacity you need to keep the lights on, our load dispatchers are not going to be happy with us, so you can't operate the system.

So, this is a busy slide but it shows you as the coal comes off and the other resources come on, you can see the demand response ramps up on there for meeting our capacity requirements, as well as the energy efficiency.

No other speakers have really spoken about cost, but this is our slide that we show our customers. What

is the cost to do this? As we show here, by 2032 our bills will double based on our estimates today, and these are the programs that will contribute towards that cost increase. And we break it down by program and discuss each one of those programs with our community to ensure that they understand why these costs are increasing.

And just another way to show it, on a cents-per-kilowatt hour and breaking it down into several different time frames we provide this to our customer base.

As mentioned, it's our objective to eliminate once-through cooling. Prior to the Haynes units coming on we had already reduced it 42 percent. And you can see that big jump that we had in June, as we turned off Haynes units 5 and 6 and brought on the new peaker plants.

Our CO2 emissions are now 21 percent below 1990 levels and we expect to be 55 percent below by 2028, with our current resource mix.

We also see a substantial NOX emission reduction over the next 20 years to be quite negligent in the end.

And I'll take questions when we all come together.

Yes?

PRESIDENT PEEVEY: Just a quick question on the energy efficiency. If I'm reading this chart correctly, it's a pretty -- if I read this chart correctly, it's a pretty sizeable increase in rates due to energy efficiency. Where's the other side of the coin, cost-effective energy efficiency which ought to reduce customer bills.

MR. HOWARD: We believe you'll see that in the customer bills, but we also have it levelized. So as you invest in energy efficiency you're not going to see direct rate decreases.

You will see rates potentially go up as you see less users, as you use more energy efficiency. But the customers we -- you can see -- let me see. You see the slide behind you here, this shows what would happen if a customer actually deploys energy efficiency, that they won't see the full impact. And this is what we're really promoting is if everybody actually partakes in the energy efficiency that they have the ability to reduce their bill more so than the projected rate increases.

COMMISSIONER MC ALLISTER: I guess just to sort of put that a little bit different way, built into this chart here is a 500-kilowatt hour per month consumption.

MR. HOWARD: That is correct.

COMMISSIONER MC ALLISTER: So, you know, part of the desired dynamic, at least and, you know, different policies achieve this at different levels of effectiveness, but you would hope that as the per-kilowatt-hour cost goes up, the overall in consumption goes -- the consumption of kilowatt hours goes down so that your bill -- in fact, Californian's have some of the lower bills in the country because of our relatively lean consumption, even though our per KWH prices are relatively high. Not so much in DWP territory but, you know, in much of the State.

So I guess, maybe, that dynamic could be reflected a little bit better in the presentation, I think.

MR. HOWARD: So, in 2032 they would double if you were 500 kilowatts, stayed 500 kilowatts and didn't do anything.

The dotted line is what we go out and promote to our customers and say if you implement some of the programs that we offer to you as customers, we think you can easily achieve this dotted line. So, you reduce and your bill should be less.

COMMISSIONER MC ALLISTER: Okay, fair enough.

PRESIDENT PEEVEY: Thus then would otherwise be.

COMMISSIONER MC ALLISTER: Well, we would hope

that, you know, you'd start out with -- you know, that percentage of savings wouldn't just be cost of 14 percent, but would kind of grow over time as technology changed, so people could do more with less, et cetera, et cetera. And your programs would evolve with that, you know.

But anyway, that's a different discussion.

PRESIDENT PEEVEY: Yeah, the point is simply that if it's cost-effective energy efficiency, for the class as a whole it should not be higher bills. I'm not talking about individual households, but for the residential class as a whole, if it's cost-effective there should be a system reduction in price.

MR. HOWARD: That is --

PRESIDENT PEEVEY: You don't seem to be suggesting that.

MR. HOWARD: Yeah, that is true if you're assuming -- if you're assuming what you're doing is entirely replacing something else with energy efficiency.

What we are attempting to do in our plan for energy efficiency is meet all growth. So, what you're not going to do is add new resources, more expensive resources to meet new load. You're trying to minimize your load or eliminate your new load with energy

efficiency.

But if I were to replace a more expensive option with energy efficiency that is correct, the bill should go down.

CHAIRPERSON WEISENMILLER: Okay, so back on what's your customer mix in terms of energy efficiency? I assume it's primarily existing buildings and not much in the way of new construction.

MR. HOWARD: We offer both new construction incentives, beyond Title 24, typically, types of programs, as well as primarily for existing customer base.

CHAIRPERSON WEISENMILLER: But what do you expect the major focus of your energy efficiency programs to be on?

MR. HOWARD: The emphasis of our energy efficiency programs right now are built around both cooling systems and lighting are the two principal programs.

CHAIRPERSON WEISENMILLER: And how are you dealing with renewable integration?

MR. HOWARD: So, L.A.'s a -- our system configuration is in a little better shape than some others for renewables and renewable integration. We have a 1,200 megawatt pump storage.

What we see is in a few years we will actually be pumping during the middle of the day, as people expressed, like charging the vehicles now during the middle of the day, we will be pumping during the middle of the day and actually generating in both the early morning and the later afternoon, as the sun goes down.

We now have about 900 megawatts, as mentioned, of quick start, so about ten minutes to ramp up for that generation to meet some of the integration needs.

And we have 160 megawatts of now not-run-of-the-river. We've changed kind of the configuration of the aqueduct system for hydro. And then we have some of the Hoover capacity that we can use to load follow.

So, we're in pretty good shape. Part of our mix as we've done the OTC is to look at quicker start, more efficient units.

CHAIRPERSON WEISENMILLER: Now, initially you talked about what LADWP could do to help in the SONGS situation. And it looked like it was steady state if you did no investments or nothing.

Is there any opportunities you could pursue which would increase the integration or interconnection between the two systems?

MR. HOWARD: So, we have not looked extensively at what we could do to help because our interchanges

aren't very strong between us and it doesn't appear that we could get capacity into some of the areas where it's needed.

The other thing that everyone needs to be aware of is our coincident peak is the same as the coincident peak in Orange County. So when they need it, we need it. And we're already short during our peak, we need imported capacity, as well.

So, if we had a fire under one of the major transmission lines that we have, we'd be in the same boat.

We don't have a San Onofre that's feeding us, but we have two coal plants that we're trying to get out of and change that energy mix, so we understand.

And we've had discussion with the Cal ISO, we've had discussions with Edison, with San Diego to see if there is anything that would be possible or if we could jointly participate in some transmission activity to increase the ability to interchange between us.

But right now it does appear that the coincident peaks are almost identical.

COMMISSIONER MC ALLISTER: So just to build on that a little bit, so maybe this is less than a critical question then. But you mentioned that, what is it, the Sylmar tie-in at 230 KB is a relatively high impedance.

Could you dig into that a little bit? Is that just a function of the voltage making a high impedance, or a high resistance, or is there some other reason?

MR. HOWARD: Yeah, it's a function of the voltage because we have 500 KV lines. DWP operates and owns 500 KV lines. They go out to Victorville that directly intertie with Lugo.

So what happens is the path, the preferred path of that energy as it comes down the Pacific Northwest would be to take out -- go out one of the 500 KV lines and try to come into Edison's territory through Lugo.

COMMISSIONER MC ALLISTER: So, are there any -- you know, what fixes, I guess, have you thought about to maybe -- you know, is it raising the voltage or doing something to adjust that path, is there any feasible alternative there to improve that network?

MR. HOWARD: We've not had that discussion with Edison or the Cal ISO at this point. I think it's something that we've all worked with for a number of years, and that hasn't been indicated to us that that would be a preferred method to bring power into the San Onofre region.

COMMISSIONER MC ALLISTER: Let's see, and then I just have a contextual question. So, you know, you were talking about an estimate of 700 to 1,000 megawatts of

demand reduction by 2021. Could you put that in context of sort of what's DWP's overall size capacity, peak demand, that sort of thing?

MR. HOWARD: So, our peak demand is about 6,150, our all-time peak. And we have about 7,400 megawatts of reliable capacity currently on our system.

COMMISSIONER MC ALLISTER: Thanks.

Anybody else, questions for any of the speakers?

All right, great, everybody did a great job there are no further questions.

MS. KOROSEC: So, our next speaker is -- excuse me -- is Mohsen Nazemi. Sorry, I had a problem here.

MR. NAZEMI: Good afternoon, Mohsen Nazemi, Deputy Executive Officer Engineering Compliance at South Coast AQMD.

I actually have the pleasure of being both a panel member and a presenter, so I think the best advantage of that is I'm not going to ask myself any questions.

(Laughter)

MR. NAZEMI: So, feel free to ask me any questions you have.

I think our objective as the agency is first and foremost to comply with Federal and State air quality requirements.

But as we have learned from the past energy crisis we also want to keep the lights on. And in this case, with the closure of SONGS, to help maintain quality of the grid, but we want to also do that in conjunction with protecting community health and minimize any localized impacts.

And as you heard earlier, I think there is going to be potential for additional economic growth and other electrification relative to the goods movement and other programs. So, we think to have this renewable energy mainly implemented you need to have some sort of a modernized grid so you can quickly have a backup system. So, if the wind and sun stop, you can bring back those units quickly on line.

I think it's helpful to go back and take a quick look at in the last decade what our agency has done since the early 2000 energy crisis.

We actually issued almost 8,500 megawatts of new and repowered generation. But, of course, that doesn't mean that 8,500 megawatts was added to the grid. Actually, probably more than 5,000 was removed as older units or replacement units.

We also amended our rules during that period to allow some flexibility for power plants and issued executive orders to provide the needed power when

there's a state of emergency.

And supported the Assembly Bill 1318 that you've heard about just before this presentation, and not only provided the support for permitting of one power plant, but also utilized the mitigation fees paid by CPV Sentinel to provide additional emission reduction projects in Coachella Valley.

And finally, the restart of Huntington Beach 3 and 4 that I'll mention a little bit later.

You're probably all very familiar with the air permitting program, but just as a reminder there are requirements to obtain permit-to-construct for new, modified or relocated. And a cornerstone of the analysis that we do relies on New Source Review Program.

New Source Review is a program that want to make sure the environment is protected while growth is taking place. And depending on the type of pollutant, for areas that are already attainment or have clean air, the program is trying to prevent any significant degradation.

And for areas such as ours, with respect to ozone and PM 2.5, in particular that is not attainment, to make sure that the air does not get worse in those areas.

When you look at the programs in general, there

are really a summary of requirements that apply with the attainment program or PSD, prevention of significant deterioration.

There's a requirement to use the best technology and then do analysis for air, as well as soil preservation, visibility, and endangered species.

When you look at the Federal Clean Air Act, new source review requirements, there's the same type of requirement for best technology. It's referred to as lowest achievable emission rates. As well as impact analysis and emissions offsets in the case of nonattainment pollutants or their precursors.

And under the California State Clean Air Act there's also requirements for the best available control technology and no net increase.

So, they're all boiled down into our own local rules. And you look at our Regulation 17, for example, that's how we implement the PST program, both for criteria pollutant and greenhouse gases.

And under our Regulations 13 and Reg 20 we implement the Nonattainment New Source Review Program.

Again, requirements are the same, back layer, air quality analysis, and emission offsets for sources that are emitting nonattainment pollutants.

If you look at our rules, the emission offsets

are pretty much required from sources through providing emission reduction credits or ERCs, unless there are exemptions in our rules, in which case we still provide those offsets to meet the Federal and State requirements.

And the two rules that provide those exemptions, one is Rule Priority Reserve, or Rule 1309.1. It mainly provides exemptions for essential public services. Those are facilities such as sewage treatment plants, landfills, firefighting, hospital, police and schools. And temporarily, for a limit time right after the energy crisis, we also provided access to power plants so they can pay a mitigation fee and utilize some of the internal bank offsets.

Under Rule 1304 is the exemptions. It also provides exemption from offsets for facility modernization or new locations, but it also has a provision for utility boiler replacement with gas turbines, which is very related to this discussion we're having here today.

So, why is use of ERC a problem in our basin? If you look at this last ten years of supply and demand, and cost relative to one pollutant, which is the most scarce one, which is PM 10, the amount of supply for ERC has dropped by more than 50 percent, 57 percent, but the

price has increased by over 2,000 percent.

And in fact, at one point during the peak, the 2009, the price of one pound of PM 10 ERC rise as high as $350,000 per pound per day.

So what does that mean in terms of the electricity generation? The last time Edison went out to RFO there were three plants that won the bids and Edison signed long-term contracts with those three plants. Two of them were new plants and one was actually the El Segundo, which was replacing existing boilers. So, they only needed a third of the ERCs that they would have needed if there was a brand-new plant.

But when you looked at those three plants together, that mustard-colored line shows how much PM 10 ERCs those three plants needed.

And you can see that it was twice as many ERCs that were available in the market. So there was no way that even if everybody was willing to sell their ERCs they could have built those plants.

So, I just want to take a moment to show you how those plants went through. The first one, the El Segundo, this plant took 13 years to be built. It started in 2000. They initially got approval from CEC in 2005, with once-through cooling, but immediately got sued and they had to come back with a modified proposal

in 2007 to replace it with dry cooling.

And they utilized -- originally, were going to utilize offset exemptions for two units, but their replacement was higher megawatts, so they were going to use our priority reserve rule, which subsequently was invalidated by the judge.

So they, at the final proposal, offered to shut down three of the boilers and the CEC approved the project in June of 2010 and we issued the permits in July of 2010, and the plant just started operation last month.

The other one was CPV Sentinel. This is a brand-new project in Desert Hot Springs, in Coachella Valley. They took a relatively short time, only six years to build the project.

It started in 2007 and because they could not find any offsets, there was actually a reference to an AB 1318 was specifically designed for Sentinel Power Plant. And they were able to access our internal offset bank and pay a mitigation fee to get PM 10 and SOX emissions. The $53 million mitigation fee has now all been offered for projects in Coachella Valley that would result in emission reductions, anywhere from school bus particulate filters, solar projects, and so on and so forth.

This project was approved by CEC in December of 2010 and we had to submit, actually, a SIP revision in order to have -- the State law was satisfied, but in order to meet the Federal law those SIP amendments were approved by EPA in April of 2011, and then we issued the permit at the time, and they started operation in December of last year.

The third project was a unique one, also. This is a brand-new project by Edison Mission Energy called Walnut Creek. But it's not in the Bay Area, it's actually in the City of Industry.

And this project took about eight years to complete. They started in 2005, originally were going to use our priority reserve rule. Again, that got invalidated.

They then came and asked where they can get offsets and they were willing to spend an equal amount of money that Sentinel had spent on mitigation fees.

But because there was no offsets or ERCs available, they actually agreed and purchased two units from AES, Units 3 and 4 at Huntington Beach, and proposed to retire those in order to be able to access our internal bank and get a permit.

We issued the permit in May of 2011 and the units, Huntington Beach 3 and 4, were shut down in

November of 2012. And also, this plant started operation in December of last year.

Now, the shutdown of Units 3 and 4 was interesting because they initially started to shut those units down in December of 2011, and they disconnected the main fuel line and double flanged it.

There were actually holes cut into the wall of the boiler. That's me looking through the unit. I believe this is Unit 4.

But San Onofre happened. At that time there was a leak detected in steam lines of one of the units. The other unit was already down. So, both units stayed down.

And as a result Cal ISO requested that due to 2,200 megawatts lost to bring back Units 3 and 4 on line.

And we worked with the State agencies and got EPA's approval to restart those units. And as you heard, now Huntington Beach 3 and 4 has been converted to synchronous condenser and that's actually a picture of synchronous condenser being used at Huntington Beach plant.

So what you heard today is that there is a significant megawatts still subject to Water Board's once-through cooling policy. And when we look a t

what's left in South Coast area, there's over 6,600 megawatts that's still subject to once-through cooling.

Now, what's interesting is if you look at it in the last eight months, over 1,000 megawatts of existing units has been shut down, units 3 and 4 at Huntington Beach, El Segundo boiler 3 and Haynes boilers 5 and 6.

And then Scattergood, that you heard, is going to also bring down 460 megawatts by 2015.

So, why did that matter to the district? If you look at all of the credits that we have used from our internal bank for the last ten years, you can see that depending on the pollutant anywhere from 23 to almost more than two-thirds of all the credits have been used for utility boiler replacements.

And the reason NOx is zero percent is because we have a cap and trade market incentive program called RECLAIM, that all the power plants are in that program, so they don't use internal bank offsets or ERCs.

As you've heard, we have proposed a new Rule 1304.1 to provide a fee for utility boiler replacement that can then be used also for emission reduction projects in the area and help to mitigate some of the impacts.

Now, to make things more complicated, the district submitted a re-designation request and

maintenance plan to ARB, who in turn submitted it to EPA back in 2010 for re-designation of attainment for the Federal PM 10 standard.

EPA approved this on Jun 26th and the result of that means that we are now attainment with PM 10 standards in South Coast Air Basin.

However, when you look at our New Source Review Rule, we have a requirement that any new or modified facility that results in an emission increase of any nonattainment air pollutant has to provide emission reduction credits or be exempt under our rules.

When you look at the definition of nonattainment, our rules specify that a nonattainment pollutant is one that is nonattainment with both Federal, as well as the State Air Quality Standards.

And although we are attainment with the Federal PM 10 standard now, we are not yet attainment with the State PM 10 standard.

So, the other requirement that potentially will apply is the State no net increase requirements. Under Health and Safety Code, any new or modified facility have to comply with BACT, as well as have a program in place by the local district to achieve no net increase.

So, in 2002, when the Federal EPA, under the previous George W. Bush Administration, adopted some NSR

reform regulations, in California the Legislature formed that they don't want the local districts to relax their New Source Review Rules.

So, Senate Bill 288 was adopted and went into effect January 1st. And it basically says that there are restrictions on changes for local districts for their NSR rules.

In August of 2004 ARB issued a guidance document that said pretty much standards that SB 288 also applies to the offsets.

One of the differences of opinion we have with the Air Resources Board is that we feel that that provision doesn't apply to offsets. And that's because if you look at Health and Safety Code, it pretty much says, "No air quality management district may amend or revise its New Source Review to make it less stringent than what existed on December 30th, 2002."

But during negotiations with bill sponsors there was a section in the rule that listed what things cannot be relaxed. And if you look at that section there are a number of items, such as BACT modeling, permit requirements, calculations. But offsets was specifically removed from that section.

So where does that leave us? EPA has redesignated South Coast Air Basin as attainment with PM

10 standard, Federal standard. Our rules still requires offsets because we're still nonattainment for the State standard.

The State no net increase potentially requires offsets for State purposes and SB 288 may prevent us from amending our NSR rules to change any of the offsets requirements.

So with that I want to bring us back to why we are here today, again. In early June Edison announced that they are permanently shutting down the San Onofre Nuclear Power Plant. And at this point South Coast is a member of the L.A. Basin/San Diego Loss of SONGS Task Force.

As you heard from Cal ISO and other presenters, we're working on coming up with recommendations. And I want to thank the State agencies for including our agency as one of the members here.

We do support the preferred resources and renewable programs. We think those should be utilized first. But if there are needs for siting of new or repowered generation, we've put a high priority on issuing those permits.

We think that the use of fees, mitigation fees from building these power plants in the local community is a good way to address some of the community's

concerns with having power plants sited.

And it is not just for new power plants. As you probably already know, City of Redondo Beach has taken a very opposing position to the expansion of repowering -- I'm sorry, not expansion of -- of the AES Redondo Beach.

And we have proposed our Rule 1304.1 and, in fact, we've made significant changes to address some of the stakeholder issues.

And, finally, we're evaluating our post-attainment PM 10 emission offset strategy to see how best we can address this.

And that concludes my presentation.

COMMISSIONER MC ALLISTER: Thank you very much.

I guess I did actually have a question, but feel free to sit --

MR. NAZEMI: I can answer it here.

COMMISSIONER MC ALLISTER: Yeah, that's great for sure. And if you want to -- well, should I give you a moment to reflect about whether you're going to have a question for yourself?

MR. NAZEMI: No, I don't, I'm sure.

COMMISSIONER MC ALLISTER: Let's see, so I guess, yeah, I want to just point out, really, that taking a long-term view we are in a much different -- with respect to air quality we're in a much different

place now than we were in the 70s, say. California's air is, in most respects, much cleaner and, clearly, visibility is higher in L.A. than it was then.

And I think, you know, in the energy sphere we tend to kind of -- those of us strictly in the energy sphere kind of tend to forget about some of the other -- some of the criteria pollutants and the other impacts that don't specifically have to do with energy and energy efficiency, et cetera.

And thanks for talking about the broader issues and the criteria pollutants.

So I guess I'm curious what, from your perspective, how the RECLAIM program is sort of relevant for this current discussion? And maybe that's just a lack of awareness on my part of what the current sort of status of the RECLAIM program is. But maybe you could -- how does South Coast see RECLAIM being relevant for this discussion to sort of help solve our current set of problems?

MR. NAZEMI: Sure and that's a good question. For those of you who are not familiar with the RECLAIM program, that's a program that we adopted back in 1993 and have been implementing it since then, which consists of, at the time, maybe 350 largest nitrogen oxide and sulfur oxide sources in the Basin.

The RECLAIM program, as I mentioned, is a market incentive cap and trade program that requires each facility -- initially gave each facility an allocation of NOx and SOX, and then he has ratcheted down those allocations throughout the last 18 years to lower levels. So, the program overall is reducing emissions.

Now, a facility has the option to either reduce their own emissions or actually purchase credits from the other participants if they have reduced their emissions and don't need those credits.

When it comes to the power plants, they are predominantly in the NOx RECLAIM program. And the existing ones operate under their initial allocation and trading. During the energy crisis we had a period of time where the emissions from power plants went so high that they reduced the price of RTC, or RECLAIM trading credits to a point where other participants could not afford them.

And so we had to give the power plants a time out and put them in a different program for a couple of years in order to stabilize the market.

But when it comes to building a new power plant or an existing repowering RECLAIM really does not impact their operation.

Because, first of all, they don't need to

provide RTCs up front before they build their power plant or get their permits. They're required to obtain those RTCs prior to start of operation.

And for the existing power plants, again, they don't need to provide RTCs up front. What they need to do, though, is to have enough in their holdings to be able to cover the emissions.

And it is more of after the fact, that after the end of the year they have to have sufficient credits. And we look at it, by the way, on a quarterly basis. So, each quarter they have to have sufficient credits to cover their emissions and they have 30 days to reconcile. And at the end they have 60 days to reconcile, if they don't, so they can go back in the market and purchase it.

So, I'm not sure if that answers your question, but I think the simple answer to your question is that RECLAIM is not an impediment to any of these repowering or new power plants being built.

COMMISSIONER MC ALLISTER: You did thanks very much.

Any other questions from the dais? Okay.

COMMISSIONER FLORIO: Just to make sure I understand here, under the 1304.1 exemption an existing power plant can be replaced with a new plant if it's

lower capacity, but they're subject to a fee. Is that the way it works?

MR. NAZEMI: Well, today they are not.

COMMISSIONER FLORIO: Oh.

MR. NAZEMI: We have proposed the rule that is going to the Board, our Governing Board in September.

But under 1304(a)(2) there is an exemption for utility boiler replacements provided they replace it with combined cycle or advanced intercooled gas turbines and there is no increase in the megawatts.

COMMISSIONER FLORIO: Thank you.

COMMISSIONER MC ALLISTER: Okay, I believe, Suzanne, we have a break scheduled now?

MS. KOROSEC: Yes, we have.

COMMISSIONER MC ALLISTER: I think we have consensus at the dais that we can skip the break. It sounds like --

MS. KOROSEC: Okay, we do need to -- we will need to take a break before the public comment period because we need to load up one technical little thing before that.

COMMISSIONER MC ALLISTER: Okay.

MS. KOROSEC: So, then we can just move on to the panel now and then just take a little, quick break after the panel is done.

COMMISSIONER MC ALLISTER: That sounds great.

MS. KOROSEC: Okay.

COMMISSIONER MC ALLISTER: Yeah, perfect.

MS. KOROSEC: And so if we can call our panelists up here for our afternoon panel.

All right, panelists thank you very much. I've got you squeezed in a little tight there at the table. Hopefully, you have enough elbow room to throw rocks and make your comments.

I think we'll start on this side of the table with Kristin Eberhard.

MS. EBERHARD: Good afternoon. Can you hear me? Is this on?

MS. KOROSEC: Yes.

MS. EBERHARD: The SONGS retirement creates both an opportunity and a challenge for us. So, California has pledged to significantly cut our greenhouse gas emissions in the coming decades, which means that we have to transform our electricity system into a 21st century system that's clean and resilient, and based around our existing loading order, which means energy efficiency and clean demand response first, and then renewables and then fossil fuels filling in any gaps.

And this is really a reversal from our 20th century system which put fossil fuels at the heart and

had energy efficiency and renewables filling in where they could.

And I really appreciate the Cal ISO and Southern California Edison really emphasizing today that that is the order in which they are pursuing things, preferred resources first, fossil fuels filling in the gaps.

But at this juncture we should keep in mind that anything we put in the ground now is going to be around in 2050. So, the opportunity here is that we can really jump start our efforts to move towards that clean energy future.

But the challenge is that we have to meet our short-term needs without committing ourselves to something that we are not going to need longer term, and that could saddle us with some pollution and some costs that we will not want down the road.

So, the best way to figure out what our needs are and how to meet them is to have a transparent public process where we analyze exactly what we need, and how is the best way to get there.

And through this public process -- we need to do this public process, first, before rushing to build any unnecessary fossil-fueled plants that we might not actually want.

So as you've heard today, the PUC already has a

public process underway. They have a decision scheduled for early next year.

The Water Board also has a process underway to look at any possible modifications to the OTC ruling.

And I just want to emphasize it's really important to make sure that these processes run their course with public feedback so that we get to the best decision possible.

So, the other opportunity I want to talk about is something that Commissioner Florio and Chairman Nichols mentioned earlier, which is there's a great opportunity to engage customers here.

So, SONGS going down is a really high profile event. People know the power plant, they know the implications, and this is really an opportunity to draw people in as partners to really participate in energy efficiency and demand response in a way that they maybe haven't in the past.

As we've seen today, there's a lot of technical details around this and a lot of -- you know, we've heard from Edison even the people here today aren't qualified to talk about the technical details.

(Laughter)

MS. EBERHARD: But there is, at some levels a decision that's really easy for people to understand and

that is would you rather have more power plants joining your community, or would you rather pitch in and become a virtual power plant by upgrading your home and participating in demand response programs.

And that's a question that I hope that the commissions and the utilities here today will really reach out, use this as a silver lining of SONGS going down that this is an opportunity to reach out and engage people.

So, you know, my main point here is wait and don't rush into any power plants. But that said, we can get started on a lot of no regrets strategies right now. There's a lot of energy efficiencies, demand response that we don't have to wait to start putting in the ground.

And I'm happy to see all of the parties here today really engaging in this conversation that, as we saw, takes lots of different agencies, different utilities, different local representatives to get to the right solution. And I look forward to you working together more and also reaching out and engaging that last, final party, the public.

Thank you.

MR. WHITE: Thank you Mr. Chair and members, John White from CEERT. First of all, I want to thank

the Energy Commission and the other agency for the invitation and the opportunity to be here.

I share my colleagues concern about the importance of transparency and openness and we really appreciate the opportunity to be here and participate in that effort.

COMMISSIONER FLORIO: Could you pull the mic a little closer, please?

MR. WHITE: Okay, thank you.

I guess one of the things that concerns us is the conflating of the problem of San Onofre's replacement with the longer-term issues of flexibility and once-through cooling.

These are two very different sets of problems that actually occur at different times a year, on different time frames. So, I think it's important that we -- and I thought Edison's folks this morning did a good job of focusing on the specific locational need for voltage, and the substations that they're focusing on.

I think, as Commissioner Florio said, this is an extraordinary opportunity to focus energy and attention, not just engaging the public, but using some of the tools that we now have at our disposal.

For example, we have a lot of metered data on buildings that's come in. That metered data can be

combined with advanced analytics and we could do some targeting of energy efficiency opportunities. I think it's very important to recognize that location matters a lot.

So, the first thing we ought to be doing for San Onofre is maximizing energy efficiency, especially in the vicinity of SONGS and those four substations.

Secondly, some of the ISO's presentations have been a little confusing on what are we solving for. Is it voltage, is it contingency reserves, is it energy?

Depending on the answer to that, you get different solutions. And I think, clearly, demand response remains the best thing we could be doing.

But despite the rhetoric about demand response, California's performance on demand response has not been there. We are laggards in the national setting on demand response.

And some of this has to do with the way it has been used in the past, primarily as a way of shaving the peak for the largest customers.

But also there are problems with market design and market practices. This is particularly true at Cal ISO.

Cal ISO, I think, has a nice project underway on demand response, a road map, but that process is

completely separate from the process of determining flexibility needs, and so forth. And what's eligible to be counted for flexibility, what's eligible to be paid with respect to the ISO's requirements are inhibiting demand response.

And, essentially, you can do it, but it's not going to count and it's not going to get paid.

Now, there's an opportunity to engage in that process. We appreciate the ISO being willing to listen. But for the moment demand response is a stranger in a strange land at the ISO and it just doesn't -- it doesn't count and it isn't thought of. It's sort of like an afterthought and, in fact, it needs to be a core strategy, particularly in response to the need for San Onofre.

We really have choices to make between are we going to import electricity or are we going to import gas and burn it.

And I think the overall priority from an air quality and a greenhouse gas stand point, and I share my colleague's, Kristin's comments about let's not rush into this, particular if the problem we're solving for is several years away.

I think Edison's idea of exhausting preferred resources while doing some contingency permitting has

some appeal because it might help shave the time. But we have to get serious about minimizing in-Basin gas combustion, particularly if it can be done, if it can be avoided with other means.

I think the -- I'm not sure what a living pilot is, but I like the idea of getting started this summer. I think Commissioner Florio's decision on the long-term procurement to allow some targeted procurements to get started right away.

Let us get some experience. We recognize that demand response has to grow up and become a different kind of resource than it has been in the past, but we should get started right away to see what we can do and maximize those resources before we commit to the gas burden that we will be living with for 50 years to come.

I have other things to say, but we have a lot of other people here, so I'll close right here.

COMMISSIONER MC ALLISTER: Thanks John. And I just want to make a quick comment. So, you're aware we're doing the AB 758 activity in parallel with the IEPR this year, and so they're roughly on similar schedules. Chair Weisenmiller mentioned it earlier.

But the data and analytics issues is really front and center in that proceeding, as well, and I just want to draw people's attention to it and also get your

input on that.

MR. WHITE: Well, we could put it to work in those four substations and see what we could learn right away.

COMMISSIONER MC ALLISTER: There's all sorts of uses of modern technology, and the granular knowledge that we actually, totally have the capability to develop. We need to create the systems to allow that to happen in the right ways, right. So, thanks for your comments.

MS. LAZEROW: Hi, good afternoon. I'm Shana Lazerow. I'm a staff attorney with Communities for a Better Environment. And I also represent the California Environmental Justice Alliance in some Public Utilities Commission proceedings. And so I'm here with two hats on.

And I want to start by acknowledging all of you for coming together to try and really sort of figure out what's going on in your different silos and how you can come together to come up with some solutions.

And I also want to really highlight the problem that the community members who are affected by the problem, and really intend to be part of and have ownership over any solution, are not really having an opportunity to participate in what feel like a whole new

alphabet soup of secret or nonpublic proceedings that are happening.

So, it's good to learn that there is a Governor's Task Force underway.

It's good to learn that the AB 1318 process has been continuing since its kickoff.

It's good to hear about a living pilot, as opposed to dummy pilots that might be flying the plane.

It's not helpful to have these processes going on. I'm not equipped to show up with technical feedback on a Power Point that I received at 5:00 yesterday afternoon. But I do have technical resources who have a lot of -- several years of analysis of CAISO studies that look like the AB 1318 process was pulling together many different studies that have been analyzed in public processes, in front of the Public Utilities Commission or the Energy Commission.

And those studies have been shown to be incorrect that they do not include all of the actual resources that are out there.

To the extent that AB 1318 is resulting in some recommendations, I think that's a real problem. And I'm sure you would agree that that's a real problem to be relying on studies that have been shown to be incorrect.

So, I want to make sure that we sort of agree in

this room not to copy any of the slides and rely on them six months from now to support a policy decision based on facts that may actually not be right now.

I want to use an example of what least regrets decision making would look like, or maybe what it would not look like.

So, we know that there are a few things that are urgent. Climate change is urgent. Air pollution impacts are urgent. People are dying. The planet is changing because of decisions that we make.

Planning for the resources that we expect and need to see come to fruition is urgent.

I think that none of the information that you've said today shows an urgency to skip ahead of the queue in the procurement decisions.

I was very pleased to hear that Edison, I believe, is counting on the 2012 LTPP as being the place to make its procurement decisions and get its marching orders. That's a robust public process.

So, I want to use an example of what I hope not to see, what we sometimes refer to as the cluster duck.

I saw it shown, the duck chart. It was on Mike Jaske's slide.

So, you've all seen the duck graph, right. It shows this catastrophic future that was projected.

Well, in the resource adequacy proceeding in front of the Public Utilities Commission that duck-shaped graph was developed -- CAISO developed it based on some general assumptions about the way the world was going to be progressing with renewables coming online, and demand curves.

But the resource adequacy proceeding, they've gotten a hold of -- the IOUs have produced actual information.

And based on that actual information, the CAISO is acknowledging that that duck graph is not going to happen. Yeah, we're going to see a change in ramping rates. And we do need to really look hard at how storage and demand response can help to address that change in the demand curve, but it doesn't look like a duck.

But I still see the duck and I feel the urgency in the decision makers' voices to avoid that duck because everything is going to fall on our heads.

Well, we can all come up with scenarios where everything falls on our heads.

Our communities, the low-income communities of color that are represented by CVE and by CEJA, we need to have electricity. We also need to have, you know, a climate that allows us to continue to exist. And we

need to be able to breathe clean air and drink clean water where we live.

And so I have a list of the resources that some of the CAISO studies on which the AB 1318 study is relying have omitted.

I think probably in the interest of time we'll submit it as written testimony, rather than listing off the thousands of megawatts that are under-counted, unless maybe in questions, if you guys want to hear it.

COMMISSIONER MC ALLISTER: I guess I was just encouraged -- so, you know, certainly, it's not easy to participate in these various proceedings. But, you know, by and large they are public.

I mean there is a way -- I mean it takes resources and that's always an issue. But, you know, certainly today is not the only day, even though, you know, you're just seeing these.

There is a time frame, which Suzanne can let us all know, and it's on the IEPR website under this. I think on the notice, actually. Written comments are open for a couple more weeks. You can leverage your technical resources and make sure to get those written into the process, and they will go on the record, and they absolutely will be considered fully.

So, the process, while not perfect and not easy,

certainly exists for you to get your voices and these alternative views on the record, so thanks.

MS. LAZEROW: And so I guess I would ask two questions in that respect. Is there a way for us to -- I mean, the AB 1318 process I guess is coming out with a draft report, shortly. It would have been really good to be able to be involved further upstream in that.

If we could find out who is actually on the Governor's Task Force, that would be very helpful.

CHAIRPERSON WEISENMILLER: I think the Governor's letter was pretty clear. It's the Energy Commission, the PUC, the ARB, the South Coast, and two utilities, and the Water Board.

MS. LAZEROW: Are there point people we should contact for that?

CHAIRPERSON WEISENMILLER: Certainly, you could reach out to Phil, who gave a presentation this morning, as one of the people.

MS. LAZEROW: Thank you.

And so I don't know whether Mohsen is still here, his chair seems to be empty now but --

COMMISSIONER MC ALLISTER: He had to leave, actually.

MS. LAZEROW: Back to Diamond Bar? Back to Sacramento.

CHAIRPERSON NICHOLS: And the 1318 report is mine. You can direct your comments to me.

MS. LAZEROW: So, I actually wanted to ask about offsetting for PM 2.5.

CHAIRPERSON NICHOLS: What about it?

MS. LAZEROW: So, the South Coast Region has just been redesignated for PM 10 and there were several slides about that. So, a large percentage of new power plant emissions are PM 2.5 emissions and I know you know this, but I'm just going to say it to frame my question. So, the South Coast uses PM 10 credits to offset for PM 2.5.

And I felt that there was a missing slide or some information about why the PM 10 redesignation is relevant to the question of how to provide offsets for power plants.

CHAIRPERSON NICHOLS: Two separate issues. There still is a requirement for offsets for PM 10 under our interpretation.

There's also a requirement for PM 2.5. But some portion of PM 10 is also PM 2.5, some fraction of PM 10 is generally PM 2.5. And there's a statistical way to look at that.

I can't answer further because I don't really understand the question. But if you want to follow up

afterwards with me, or with Mike Tollstrup, who is the actual author of the report, we'd be happy to try to answer the question.

MS. LAZEROW: Okay, so my point, I think with that was to not sort of let this illustrious group think that the participate matter impacts from new power plants, because of the redesignation was no longer a live issue. And I thought Mohsen could speak to that.

CHAIRPERSON NICHOLS: You got to make your point.

MS. LAZEROW: Okay, thank you.

MS. ROGERS: Hi, good afternoon. My name is Nika. I work with the Division of Ratepayer Advocates. I'm a Senior Analyst in the Long-Term Procurement Planning Proceeding.

I want to thank you for inviting me to be a part of the panel.

For those of you that aren't familiar with DRA, a lot of people think we're just concerned with cost and representing ratepayers.

We're also concerned with safe service, reliability and environmental protection. So, we see this as a big issue that's something worth addressing.

I have three takeaway points for you all today. The first is that we really support a SONGS replacement

solution that's fact-based and accurate.

We see that there are a variety of solutions to addressing the replacement needed for an early SONGS retirement.

And we also see that the CPUC is on the right track with the SONGS long-term procurement planning or LTPP analysis.

To my first point, we do support a SONGS replacement solution that's fact-based and accurate. We see the solution to this problem as manageable. We want to make sure the grid reliability and power flow analysis being conducted are done accurately and using realistic assumptions and inputs.

We see that there have already been a variety of long-term -- or short-term solutions that have been implement, such as the Huntington Beach synchronous condensers, demand response programs that have been called upon.

And we also see that there are a variety of studies underway to determine the long-term impacts of SONGS retirement on grid reliability. This includes the CAISO's TPP for 2012-2013, as well as track 4 of the LTPP, which is examining SONGS early retirement.

CAISO's part of this and they have agreed to run the power flow analyses looking at 2018 and 2022, as

well as Edison and San Diego.

The big thing that we see is that these power flow analyses are not yet complete and the results won't be available until next month or in August.

And at this time we will be participating, as well as environmental groups, independent power producers, other stakeholders. At this time we'll have the opportunity to vet these results in a transparent way.

We support, as much as possible, agreement on the outcomes and long-term consensus building for the solutions.

To that point we note that there are a variety of solutions. When you're using a lot of different assumptions and inputs into the power flow analyses, this will inevitably lead to a variable range of megawatts that may be needed to fill the void.

The range of megawatts needed should prompt you, as decision makers, to evaluate a variety of solutions to address this need and arrive at a holistic solution that is not only cost effective, but ensures reliability and long-term stability.

We would like to see solutions for SONGS replacement, one that maximizes reliability, cost effectiveness, as well as GHG reduction because -- and

we believe the way to achieve this is through a diverse portfolio of resources.

Cost effectiveness should definitely be part of the discussion when selecting resources to fill SONGS. Least cost/best fit should continue to be used in the IOU's bid evaluation process for resources that come in through a request for offer.

We think that track 1 of the LTPP, the decision that came out of that, which addresses the local capacity and reliability need in Edison's territory, and San Diego's, could be used as a model to create a diverse portfolio of resources to address SONGS.

Of course, this can include energy efficiency, demand response, CHP, distributed generation, as well as reactive power, transmission upgrades, upgrades to existing plants, energy storage, as well as new generation.

For preferred resources, geographically targeted programs are one solution. This can include measuring energy efficiency at the bus bar or at substations, and developing pilot programs, which Edison spoke about, for localized DG and geographically defined areas where these resources would have the most impact on reducing the need for new generation, and in a most cost-effective manner.

These are things that need to be considered when selecting those resources to make up a diverse portfolio.

How effective will the resource mix or portfolio be by reducing costs for ratepayers?

How can the CPUC's current renewable programs be used to promote and achieve any established renewable procurement allocations and preferred resource targets?

How effective will the solution or resource mix be at reducing GHG emissions?

How effective is this resource mix at meeting the loading order and other State policies, like OTC compliance?

And lastly, do these solutions provide short- or long-term benefits and stability for ratepayers?

To my last point, we really support the CPUC and believe that they are on the right track with the SONGS analysis in the LTPP.

The CPUC has set an expedited schedule for track 4, the SONGS track, to address these replacement solutions and it will be done in a timely manner, with the decision expected at the end of this year, possibly early next year.

We support this process because we find that it achieves the right balance of conducting a thorough

SONGS, grid reliability and need assessment within a reasonable amount of time.

The first step to ensure that, though, is to see the results of the power flow analyses that come out next month before fully exploring the range of options available, and not duplicating efforts in analyses that are already under way as part of this track in the LTPP.

This also includes making sure that these results feed into track 2, which looks at local capacity or flexible system units and renewable integration.

Thanks for your time.

COMMISSIONER MC ALLISTER: Thank you very much.

MR. WOODRUFF: Good afternoon. My name's Kevin Woodruff. I'm a consultant for The Utility Reform Network. I follow long-term and short-term procurement issues for TURN.

I don't have a lot to say that hasn't been at least hinted at before, so I'm going to keep it relatively brief.

First, this has been a very good day of discussion to have all of this stuff in one place and updated for the loss of the SONGS capacity and other attributes.

Things I would emphasize are number one, process. A bunch of slides from today's presentation

may, you know, point the way towards solutions, but not without some further vetting and further analysis.

I don't like the -- I would hate for the sort of urban myths and means, and other such manifestations of, you know, sort of the information getting out in the public driving the decisions before various parties and organizations have a chance to look at the representations in more detail. So, process is important.

And Nika really stole my thunder on cost effectiveness. Thank you.

I think the first mention I heard of that I think came from Randy Howard, from LADWP. But there's someone from the PUC space that mentioned that. And I'm sorry if I missed someone else, but this is an important issue.

No, I think maybe part of the problem is we all realize it's not going to be pretty, the solutions. It's not -- you know, there is nothing, there's no cheap way out of this even before SONGS, perhaps. Cost effectiveness is going to matter greatly.

Third, I was very encouraged to hear all the nice talk about demand response and energy efficiency, that's a good thing.

I don't know much about the DR and EE issues, so

I'll defer any technical questions to that although -- to other comments to other folks.

I'm very glad or I very much like the idea of what Edison is doing with their living pilot. The concept is kind of scary, but that can certainly head down the wrong path.

But I think there needs to be more attention paid to how to make the alternative resources work. You know, it's very easy to burn gas, build gas and burn gas. We know what the costs are. It's very reliable, you know, it's very predictable. It's kind of like Linus's security blanket, you know.

And doing this other stuff is not nearly as straight forward and takes a lot more work, but if we want to achieve our various environmental goals we have to spend that effort.

So, I'm glad to see folks seem to be on board with that.

The last comment I'm going to make is going to be a bit of context from the AB 1318 study. I think Shana was getting at some of this stuff.

I've watched the Cal ISO renewable integration modeling for over four years, now. I'm familiar with the methodology.

And if I had been -- when the AB 1318 studies

were starting, if I had been presented -- back in my days as a consultant, you know, a modeling consultant, and had been presented with this task, I probably would have grabbed the Cal ISO's methodology, and the 4,600 megawatt scenario, the results of that scenario and that data set as a place to start because you have a number that's a lot bigger than zero.

And when you do sensitivities you actually get some interesting results. When you start with a number that's zero, you don't really know what your sensitivities are telling you.

So, I can understand the appeal of that scenario and that dataset for doing these studies. It's important -- there's an important bit of context that was missing from today's slides. That particular scenario is not an accepted, or litigated or consensus position.

Okay, the Cal ISO has promoted that, but it's important to remember a lot of the studies they did for the Commission just two years ago had -- based on the Commission's own assumptions had zero need, zero megawatts.

It was only when they bumped load, peak and energy load by 10 percent that they got to the 4,600 megawatts of need.

I have some general concerns about the methodology, the way it's implemented.

You know, and all the need is being expressed in terms of what I call new gas turbine equivalent, or new gas plant equivalent. There's no sort of consideration of retrofitting existing gas plants for greater flexibility, and some of the other ways you can achieve that goal.

Am I taking some of your time here? Okay, I thought you might like this.

But there was no consideration of those kinds of alternatives, as well, so it's a very important bit of context for this AB 1318 study.

And, Ms. Nichols, I put myself on the list serve for the AB 1318 study. I'm not sure if my client will file comments, but I'm looking forward to at least paging down in your report. Thank you.

MR. SMUTNY-JONES: Great, thank you very much. I'm Jan Smutny-Jones with the Independent Energy Producers Association and it's good to see you all again.

I'm not sure what it means that we're in the basement of an archeological museum but --

(Laughter)

MR. SMUTNY-JONES: -- with all this talk about

dead pilots and everything, I --

(Laughter)

MR. SMUTNY-JONES: At any rate, I think my job is I'm the gas guy here or something. I represent utility-scale renewables and gas facilities, as well as many of my members are in fact doing storage, and they're in fact doing demand response, and DG as well, so it's a pretty mixed group.

But I'm here today to kind of talk about the issues that are directly before us with SONGS and the once-through cooling.

Obviously, we need a reliable system. We need a system that is environmentally responsible, and a system that's affordable. And I think some of those issues have already been covered.

With respect to preferred resources, there appears to be this factoid appearing that somehow we're not doing preferred resources. And I think there's nothing that could be further from the truth.

We have some of the world's most stringent stability standards, appliance standards, other types of standards. This State's spending over a billion dollars a year on energy efficiency.

And, you know, where we've always been supportive of that provided it's real. And I think

that's the big issue. If the commissions that are responsible for this continue to be committed to expending money and in fact you're getting results from these programs, great. And it's a very positive development that's occurred over the last 35 years.

With respect to demand response and storage, both of these are really good resources for moving the use of energy around in time. Okay, but they do not in and of themselves create energy.

Okay, you know, like a piece of Tupperware's great but you've got to put something in it for it actually to be useful. And that's kind of what we're talking about here.

(Laughter)

MR. SMUTNY-JONES: So, you know, while we believe that -- and as I said earlier, one of my member companies had a battery sitting down in Huntington Beach for a couple of years. No one could figure out how to plug it in or what to do with it.

So, it's not like we're new to this or it's not like we're hostile to all of this. But again, this stuff has to be integrated into the system in a way that it actually is working.

And I think as Mr. White suggested, it's not real clear what the mechanics are or what the market

mechanics are that would encourage the use of storage or demand response.

There are some -- you know, the Commission has instructed in the LTPP Edison Number 4 so, hopefully, it will come out of that.

Okay, but again these things have to be real and in terms of moving forward.

With respect to the once-through cooling issue, and I represent the people who own those plants. And, you know, when I first moved to California I lived in Redondo Beach. I used to body surf in front of Huntington Beach. I went to Long Beach State.

So, these are like old friends to me, I've known them for a long time.

(Laughter)

MR. SMUTNY-JONES: But unlike me, it's time for them to retire.

(Laughter)

MR. SMUTNY-JONES: And although some people may disagree with that.

But the once-through cooling is a reality. The people who own those plants are operating them right now under the assumption that they are required to shut them down no later than 2020, so they are making the capital plans, the resource plans to basically move forward.

And on again/off again won't help.

So if, in fact, people want to hit the pause button on once-through cooling, and I'm not here asking for that, do it soon so everybody knows what's happening.

But I think by and large the people who own those plants are expecting to do things with them. There's licenses that in some cases have been issued.

You pointed out down in Carlsbad.

And by the way, President Peevey, I agree with you, the Marine Corps should stick to its core mission which is not, you know, becoming a merchant developer of power plants.

But at any rate, so moving forward, the fact of the matter is that what we need here is a predictable LTPP. We'll learn from this last one.

And we need an orderly, timely licenses for plants that do in fact come before the Commission and meet the very stringent environmental criteria we have in California.

And, you know, we need to be sure -- and it sounded to me that the South Coast had to leave, but we may in fact have shortages of VRCs and other things that perhaps restrict what we can and can't do. So, I think that's very important.

I think Kevin did point out the fact that, you know, in addition to these once-through cooling units there are other people out there that would like to build replacement units for those units, or we have an existing fleet.

We actually have a pretty modern fleet that has been developed over the last 10, 15 years that could, with small amounts of capital perhaps do some changes there.

So, I think the other point I want to make is signals to utility-scale solar. There's a lot of talk about -- earlier talk about the duck chart, this and that, whatever.

We haven't done a good job collectively, in terms of addressing the issue of integration and the fact that we're encouraging resources that are very good at displacing fossil and have zero air emissions, so they're positive. But they have -- you know, they're intermittent.

So, we haven't done a really good job of creating mechanisms that allow for either those resources or other people basically to solve that problem.

And I think that's something we ought to put on the to do list.

Obviously, the SONGS closure, regardless of what you feel about nuclear power, and I'm going to let my good friend John Geesman take care of that one, but the fact of the matter is it did not emit GHG gases and we're going to be displacing this with other resources and we have to be cautious how we do that.

A couple of other just sort of observations, on DG there is a lot of faith being put on we're going to solve everything through rooftop solar. And I think rooftop solar, there's no question, has taken over. There's about 1,700 megawatts of it now in California, in due large part to the success of the California Solar Initiative, and we'll see how that goes.

The question really comes down to there was a Resnick Report that was done by Cal Tech, late last year, that indicated on the distribution level at some point in time you start running into difficulties.

So, I'm not saying this is a criticism, but it's something that you, as energy planners, have to be thinking about. Okay, at what point in time -- how does this all work? Because there's a physics problem that's happening actually at a level that, you know, we're not currently talking about in this room.

And then the transportation issue, which I think the South Coast -- the biggest possible thing we can do

for both climate change and for localized air pollution is electrification. And that has implications, too, in terms of the generating resources out there.

So, in closing here I want to just basically say gas is not the new coal. The fact of the matter is while the rest of the country is celebrating the fact that they're shutting down 80-year-old coal plants with new gas plants, in California we seem to be taking a somewhat different path.

We have a -- we have made significant progress over the last few years. Our energy efficiency expenditures, as indicated earlier, are significant. We've doubled the amount of renewables we've had over the last seven years. The overall efficiency of the existing gas fleet has improved by 21 percent.

So, there's some very, very positive things going on there. So I am encouraged by the work here. We're going to have plenty of opportunity in the various proceedings that you all have to argue these issues out further.

And I do appreciate you giving us some opportunity to express our concerns. Thank you.

MR. GEESMAN: John Geesman, representing the Alliance for Nuclear Responsibility. I, too, want to thank you for the opportunity to address you.

I guess I have a little more discordant view than most of what you've heard today. And I sense that deep down some of you may share it.

The nature of this type of meeting I think is almost always to put a positive face on things. I think we're in a little bit of a tougher situation than that.

And I think one of the reasons we got through last summer as well as we did was a lot of heroic activity on the part of all of you, and the South Coast, since they've left.

(Laughter)

MR. GEESMAN: I think that the reason why there's some optimism for this summer is also because of a lot of heroic activity by all of you, almost all of it behind the scenes.

Now, I am a big advocate of transparency and all of that stuff, but those of us that trace our political genealogy back through the Grey Davis Administration know that first and foremost you keep the damn lights on.

And I think that those are the marching orders you're under. It certainly should be. And I think in that context if you can get through this summer, you're going to have to face next summer. And then you're going to have to face the one after that, and the one

after that, and the one after that.

This is a multi-year challenge.

Southern California Edison Company put you in this hole. You had a reasonable plan with how to deal with the once-through cooling plants. It was an orderly process, a ponderous process. You spent a lot of time working out the calendar, but you knew what you were doing. You communicated that extremely well. And then San Onofre collapsed.

And I don't want to get into who was responsible for putting defective equipment in the single most important generating asset in Southern California. But after they opened up those steam generators, a year and a half ago, and saw the degree of osteoporosis impacting all of the tubes in all four steam generators, in both generating units, they owed you a phone call. They owed the Governor a phone call. They owed their customers an explanation that this was a damn tough circumstance and it wasn't clear how it was going to work out.

And given the likely cost of having to fix things, the odds were pretty heavy they were going to pull the plug on the plant.

And they didn't and, as a consequence pick your spot on the calendar, you're 14, or 15 or 18 months behind where, ideally, you should be.

Now, I say that largely because I think part of your solution is going to be needing to bend somebody's business model. And I've got a nomination as to who that is.

There's no reason at all, either, to think that Diablo Canyon is any exception to what happens with aged nuclear facilities when the expense of fixing them gets too large to rationally justify.

And you've got a plant a couple of hundred miles up the coast that is so far out of compliance with its existing seismic design standards, let alone the 1998 standards that the NRC applies to new plants, let alone whatever they choose to apply to their post-Fukushima seismic standards. That at some point, relatively soon, the bill is going to become known for fixing that power plant.

It's not going to have as disruptive an impact on the electric grid, according to the ISO studies, but it will be extraordinarily disruptive to energy policy.

Any climate policy that was premised on 4,500 megawatts of geriatric nuclear plants operating 90 percent of the time had some vulnerabilities; shame on all of us for not thinking about that more including myself.

The second point I'd like to make is I'm not

certain the discussion today fully reflects the binding constraint that air quality considerations are going to play on your options here in Southern California.

You're here in smog town. And I think the fact that most of you are Northern Californians, I'm a Northern California, but I'm a smog refugee from Southern California.

And I don't think that it's been fully recognized the degree to which that issue is paramount here and it imposes some bone crushing constraints on your ability to even think about combustion options inside the Basin.

And I think the difficulty in State government on this issue you know well, getting the South Coast Air Quality Management District in tune with the rest of the State agencies is pretty hard to do. And I certainly don't relish the prospects that you face to the extent that you're pursuing combustion options.

And I think you should. I'm a little bit like Smutny. I think if you can find gas-generation capacity, you ought to take advantage of that opportunity.

I distinguish between capacity and gas-fired energy. I don't have a problem, build all the plants you can and just don't run them. That will satisfy the

ISO models.

(Laughter)

MR. GEESMAN: I think the other thing that I would strongly recommend that you do is introduce yourselves to Eric Garcetti. He has announced an intention to expand the City of Los Angeles' feed-in tariff from 150 megawatts, which is the current program, to 1,200 megawatts by the year 2016.

Sometimes it takes new leadership, frankly younger leadership, to start asking why not in circumstances where all of the rest of us get road blocked.

And I think that you ought to look very carefully at the experiences that the city goes through. Try to learn from them. Figure out a way if you can develop a parallel program with the much larger service territory represented with the Southern California Edison Company and San Diego Gas & Electric.

And the last thing I would say is I think that more than anything else you should be motivated by the twin spirits of humility and redundancy.

Humility because, you know, when was the last major State government initiative that was actually categorically a success? It's very, very hard to do and you are doing the toughest of all tasks, which is trying

to get multiple organizations to work together.

And as a consequence, I think the best way to approach that is with a fairly high level of redundancy. Don't expect any of your strategies to perform at a particularly high level of success. Cover them each with redundant strategies in other areas.

More likely than not, most of them will produce something. But I certainly wouldn't look for the single heroic solution that's going to solve everything.

Thanks very much for the opportunity to see you.

COMMISSIONER MC ALLISTER: Thank you for being here, John.

I guess I might ask a clarifying question. It seems like about the -- so that last point is well taken. I also get a lot of feedback in the various contexts where we're developing lots and lots of strategies to streamline, and condense and prioritize. So, you know, interested in which of those -- how to coordinate both of those kinds of strategies, you know, how to focus on the right ones. Develop lots, but see which ones are going to work and then, you know, focus on those. But thanks for being here.

Any questions from the dais?

COMMISSIONER FLORIO: Yes, for Mr. Smutny-Jones, you mentioned that you have other members beyond the

ones who own the OTC plants who would like to build replacement capacity.

Is it even possible, given the air quality constraints if you don't have an existing plant, is there a way to get air permits?

MR. SMUTNY-JONES: It may be. I'm not familiar with every specific site. I just know we have a pretty healthy group of people who are capable of developing those sites.

That's when I start hear about the Marine Corps developing sites I go, well, that's certainly not their core business.

You know, so there are people out there who have been looking for sites. This ERC problem may be insurmountable and it may well be what's here is what you get.

But, certainly, if you had asked me in the mid-2000s, you know, would Walnut Creek win a bid, I'd go what are you talking about? You know, why would that happen at all.

COMMISSIONER FLORIO: You came from Huntington Beach.

MR. SMUTNY-JONES: I came from Huntington Beach.

Yeah, but the point is that I think that there are opportunities there. And you'll find it out in the

-- through the LTPP and siting cases you're going to find out what's there, and if it makes sense from a cost stand point, and if people pass the environmental standards, great.

And I think, actually, as Mr. Geesman said, look, if you build a power plant and in fact I'm wrong with respect to all of these other things being as effective as they are in the future, they won't run, but they're there if you need them.

And we have found by the past that, you know, that might be necessary.

The other thing I wanted to point out is we're out of time. And I wanted to actually steal some of his speech here. If you look back at the power plants that just came on line, El Segundo, Sentinel and Walnut, those were all the product of a 2006 Edison RFO that wasn't being driven by SONGS outage. It may have been informed by impending once-through cooling issues. But it was being driven in large part based on the fact that Edison, during peak, was up against its planning reserves.

And why was that? Because the economy in Southern California was booming and people were moving east, okay. And when you live here, in Westwood, or Huntington Beach, or Santa Monica you don't need air

conditioning. If you live in San Bernardino Valley or Apple Valley or, you know, the further east you go you need it.

And so as the economy recovers I think we're going to start seeing growth again and the time that we have to fix these problems shrinks.

And so I don't think the sky is falling, but I do think we don't have a whole lot of time to sit around and twiddle our thumbs and, you know, we need to get busy getting this stuff done.

CHAIRPERSON NICHOLS: Can I just make an observation, because I am the both Southern California and Air Quality person sitting here on this panel right now, in the absence of Mohsen, but I don't think he'd disagree with what I'm going to say.

So, first of all, just a reminder San Onofre is not actually within the South Coast Air Quality Management District. San Diego is not within the South Coast Air Quality Management District.

San Diego is its own air quality management district.

And as several people have reminded us, the immediate issue of serving the people who are dependent on San Onofre is not the same as the long-term future power need for the entire Southern California region.

We do need to be addressing that, and sooner rather than later, for all of the reasons that all of you have said. But it's not the same issue.

And so, first things first, let's get our act together and make sure that we're dealing with the immediate concern here.

But the other thing I do want to say, as somebody who has spent many years working on air quality in the south coast, these regulations are incredibly complicated. They're also very easy to misinterpret.

Just as you've hear people saying once-through cooling was the constraint that prevented anything, it's just not true. You've got to read the regs, not read the press release or the third-hand story about what it means.

And the fact is that there are things that can be done to make things more efficient and to find ways to get credits to build things, even that burn stuff in Southern California.

I'm not saying that we should be looking to do that. That should not be our goal because we've got other priorities, and preferred resources, et cetera.

But it would be better, I think, if we could try to approach these problems from the perspective of where we're trying to go and then look at the constraints and

see if they're real. And if they are, you know, is there a way to fix them. And if not, then maybe we have to -- maybe we really do have conflict.

But, you know, on behalf of everybody sitting up here, I think the best thing that's happened, and I think Mr. Geesman sort of alluded to it is that maybe it looks like we all think everything is wonderful because we're all sitting together and talking. I don't get that sense.

I think what we're trying to convey and what we're actually doing in all of these various forms that the bunch of us seem to be engaged in is trying to get out of our own way and make sure that we're not a constraint to the things that everybody wants to see happen.

So, I really appreciate the time and effort that people have put into this. And particularly those of you who have comments, concerns, questions about any of these documents that we're dealing with, you know, let's get at them, let's address them and respond to them.

So, I think Mike wanted to say something.

PRESIDENT PEEVEY: Well, I would just echo what Mary said in the following regard: John, and all of you, I mean we're together because of a sense of urgency, not because of a lack of same.

Believe me, we all easily retreat into our own silos, if given a chance.

(Laughter)

PRESIDENT PEEVEY: This was kind of forced march here, the ARB, the CEC, the PUC, the ISO, the South Coast AQMD, the State Water Quality Control Board. And it all reflects, frankly, an awareness I think on the Governor's part that these are very serious matters, very urgent matters and that we have to really get with it.

And as you and others have implied, with kind of a betting on a whole series of horses in this thing, there's no magic bullet, there's no one solution.

We need more energy efficiency, we need more demand response, the right kind of demand response, and not that stokes up the diesels. We're not going to do that. We didn't do that in the energy crisis. We're not going to do it in the future here.

So, more generation, as Mary says, the South Coast is here, and it's very, very limited. But San Diego, there's a clear need for a lot more in San Diego of things to be done, and it is a different AQMD, or air district and all.

But we take, I think, the responsibility very seriously. And one of the reasons why we're here today,

and we were together a week ago, and we will be together again, and again, and again as a group is to test things amongst ourselves, and upon ourselves, as well as in a more public forum like today.

And I agree about Edison frankly dallying. I mean let's face it, day one, February 1 of 2012, not so obvious. By the fall of 2012, a little more -- a lot more obvious, right.

Fortunately, the lack of --

MR. GEESMAN: I can walk you week through week and ask you that question.

(Laughter)

PRESIDENT PEEVEY: Fortunately -- fortunately in the proceedings of the PUC things are retroactive to February 1, 2012, as you know very well.

MR. GEESMAN: Actually, they're retroactive to January 1, 2012.

PRESIDENT PEEVEY: Okay. That's not on my fold, Mr. Florio and myself.

CHAIRPERSON WEISENMILLER: No, again, I think part of the wrap-up, just to sort of, you know, bring people back on it at this stage, is one of the interesting things is we look at the 1 in 10, we're talking 4 percent.

And the 1-in-10, those of us who really focus on

climate change understand that the climate is changing in California. It's now 1.7 degrees warmer than it was in 1890. It's expected, you know, going out to 2020, 2022 it's going to be warmer again. Again, with the greenhouse gas emissions it's going to go up.

And at this point I, frankly, don't have a great deal of confidence that what's 1-in-10, what historically has been 1-in-10 is really 1-in-10. It could be 1-in-20 could be what's the new 1-in-10.

And so, you know, at this point in the summer we're really a hostage of things going wrong or temperature, you know, at a time when the temperature is changing. I mean, God bless, extreme climate is something which is occurring.

And at the same time you've heard, maybe relatively extreme events, but SDG&E's prepared to drop 1,100 megawatts of load right now. You know, as we look at the substations in Orange County, again, we may have to drop load on those subs, you know, depending upon things, if things go haywire.

So, we certainly have taken action. I've been sort of one of the strongest proponents of saying our contingency plan has to be, you know, basically SONGS not coming back. We needed to do that last summer. We need to do it next summer. I've been saying for the

following summer and it turns out it's gone forever, so we need to deal with that.

And, you know, as we deal with the integration issues I'm hoping Diablo doesn't continue to be our largest intermittent resource --

(Laughter)

CHAIRPERSON WEISENMILLER: -- but so far there are issues -- got you.

So far there are issues on its performance that we have to address.

But anyway, as I said, certainly this is the year of energy efficiency at the Energy Commission. We're going forward with the strongest standards we have had in almost 40 years in terms of the 25 percent reduction relative to the prior standards.

Certainly, you know, we had the battery charger standards going in place. We have another round of appliance standards.

Certainly, Commissioner McAllister is passionate about existing buildings. You know, I've been trying to crack that nut for 30 years and, hopefully, we're going to make progress on that for --

COMMISSIONER MC ALLISTER: No pressure.

CHAIRPERSON WEISENMILLER: -- for getting to scale for deep retrofits and also, again, getting more

of a high quality demand response, not bugs by any means, but something that can respond in a half-hour.

So, again, I guess the bottom line is this is the time of challenges and certainly the opportunities for policy.

And if we can figure out some CHP down here although, frankly, I've not seen much in the way of large thermal loads in Irvine County or Orange County. You know, it's just -- we've looked. But again, if you can find it, God bless. But, you know, you have to deal with physical realities on some of these things.-- for getting to scale for deep retrofits and also, again, getting more of a high quality demand response. Not bugs by any means, but something that can respond in a half-hour.

COMMISSIONER MC ALLISTER: Thanks. I want to apologize to -- yes, go ahead.

MR. WHITE: Mr. Geesman made a point that I wanted to follow up on about the importance of getting zero or low emission energy. And one of the silos that we have is the RPS is sort of separate over here from reliability, and so forth. And the PUC has the opportunity with upcoming procurement to suggest more consideration of the value of energy and some of the resources, like the geothermal in Imperial, that haven't

shown up, could be a part of this solution. But we need to consider it when we're looking at something more than just price.

COMMISSIONER MC ALLISTER: I mean preferred resources, all preferred resources were not created equal, right?

I keep coming back to -- and we hear it over and over again, in this forum and, you know, in many of the forums, you know, whenever we're coming at this topic.

Whether it's existing buildings or appliance standards I mean there are -- you know, we keep hearing -- we're basically all learning a bunch of different languages at once or on a much different -- you know, we're on Mars, Venus and I don't know how many other planets and we're trying to sort of communicate, and trying to figure out what the metrics are or what the definitions of these different resources are that can --

MR. WHITE: What the value is.

COMMISSIONER MC ALLISTER: And how that translates to value, for sure. But there are different characteristics and how they all fit together and how they do or don't substitute for one another, right, that's the fundamental question.

So, you know, I've been having this discussion more on the demand response and energy efficiency

fronts, but it's across the board. It's on transportation, it's on long-term procurement. I mean there's a lot -- it's really in all of these critical areas that keep coming up today.

And so, certainly, I want to apologize to Mr. Geesman because, you know, I don't mean to seem like an optimist.

(Laughter)

COMMISSIONER MC ALLISTER: But I think there's a certain -- you know, I think there are a lot of technologies -- there's a lot of innovation in the marketplace here that does actually make me hopeful that we're going to be able to solve these problems at some level. Sort of, you know, it's certainly possible physically.

Our challenge is to come up with the policy environment that's going to allow all of these things coordinated properly to maintain reliability, enhance it, and long term have the resource adequacy and have all these pieces in place such that the system runs smoothly.

So, certainly, this is a huge challenge. But, you know, there's a certain amount of carrot and stick. And so, you know, on the one hand you have some cheerleading kind of to keep the teams together, but on

the other side, you know, there's got to be consequences for not coming through.

So again, you know, with Edison and some of the situations today that's got to be on the table.

So, you know, I definitely want to just put a little bit of an edge on this as far as the seriousness. It's absolutely there.

I mean we're, I think, very collegial, understand, you know, all of us that we must be working together for any number of reasons. But these are not easy problems and we definitely need the record to help us. We need all of you to help us and sort of, you know, put in your two cents about, from your particular perspectives, what the highest priority initiatives ought to be.

So, we're not always going to agree but, certainly, that's part of the discussion. That's the way the process works and I think it's a -- with all its failings, there's a lot to like in having this kind of multiple kind of input.

So, I wanted to see if anybody else from the dais has any comments or --

COMMISSIONER FLORIO: Well, I was just thinking of the expression "it takes a village" and it's really going to take a village and then some to solve these

problems.

And I certainly don't underestimate the difficulty of it. And we struggled to come up with a decision in February. I think we did a decent job, but certainly there are parts of it that can be argued with, and now we have to turn around and do it again.

And we're going to keep pushing and do everything we can to get the preferred resources. But, you know, at the end of the day if we can't, we've got to keep the lights on somehow.

So, you know, I think the idea of trying a lot of things and if we end up with a little redundancy there's some cost associated with that, but it's a lot better than the alternative.

So, you know, we'll keep pushing and continue to appreciate the input. We couldn't do it without you.

COMMISSIONER MC ALLISTER: So, Suzanne, I think we're going to take a break now. About a five-minute break, but I'll let Suzanne say it.

MS. KOROSEC: Yes. Let's try to do five minutes and then we'll come back and start in on our public comment.

So, if anybody wants to make a comment, please remember to fill out a blue card and bring that to me.

(Off the record)

MS. KOROSEC: We've received quite a number of requests to speak today. So, the way we're going to do this is I'm first going to get one representative from each organization, since I've got a lot of multiple cards from the same organization. Get through those so that each organization has one opportunity to speak.

Then we'll go to the WebEx folks and get those few that we have on there, and then we'll come back and let the other folks from the organizations have their opportunity.

We're just trying to make sure that everybody gets at least one opportunity to speak before we run out of time at the end of the day.

So, our first commenter -- and again I'll remind you we have a three-minute clock, which I'll start so you can see it up on the screen as you're speaking.

Our first commenter is from Ray Lutz.

MR. LUTZ: Yes, thank you. My name's Ray Lutz, I'm with Citizens Oversight. And I want to, hopefully, because I have an engineering background, reflect on what you guys have been talking about and try to figure out what you haven't been talking about, what you're leaving out.

I think SONGS closure is one of the best things to happen. I'm sorry, I'm just going to stop because I

don't have the attention of the Board. Thank you.

The SONGS closure is one of the most important things that have happened to the energy planners because it gives you a kick in the butt, really, and it gives you a good excuse to do things that maybe you wouldn't be able to do otherwise.

And I'm not talking about adding a bunch of bad power plants that we know that we don't want.

But you've got a problem and it's called granularity. You've got a lot of things that need to be done and it's hard for a single board to work on all that and think about it.

So, you're thinking about a few plants here and there, and maybe a few dozen, maybe a hundred, but not a million.

You guys are not thinking of the million producers out there that you're going to be worried about, and the millions of consumers. You just haven't been talking about it. Not talked about.

It was brought up that we need to get down and look at those with some analysis tools.

Get a million people working on generation and we're going to have a million people thinking about how to do it better, how to do it renewable resource wise, and so forth, and better.

And now you've got a few big companies thinking about it. And, unfortunately, they're thinking about how to make the most money and not how to do it better.

That's fine; get those people to work on making the money. But it's your job to figure out how it is to orient making money with getting the job done, with what we need to get done, and now they're two different things.

Twenty-five percent of the load is used for pumping water. That should be a really big key item to take a look at. If you've got 25 percent of anything, you should be focusing on how do you deal with this water pumping problem such that you can maybe use solar energy out there to pump when the sun is up, and take those people off grid. If you do it right there, then you don't lose everything in between.

You did not cover enough of those renewable programs in the presentations today. The maps of where the solar panels are going in, maps of where are these things were not discussed. You did not discuss all of those renewable resources and where they're going in, and plans to do it.

You did not discuss legislation or ways to get more power involved, completely off the map. I didn't hear much of any new legislation, new initiatives going

through to get people to go into renewables. It wasn't discussed.

And I do think you should include Diablo Canyon closure. I went to the CEC meeting where you talked about the seismic issues. It's not trivial. That plant is under severe problems with the seismic issues.

And if anyone was honest, they would say it has to be closed down. So, that should be in the planning. Start planning now for that one.

The reactive loads, one more thing, granularity, yeah, you're thinking about a big, synchronous reactor in some plant, but what about distributing those at the loads. It's a harder problem because now you're talking about thousands of loads out there to reduce the power factor situation.

So, there is a lot of people who want to get involved in this. This meeting is out of the area. You've got it up here at UCLA, instead of down where the community wants to be involved.

So what you said, Commissioner Florio, about we want those people to be on a positive basis and coming here and not fighting, but getting involved, embrace people who want to be involved. Embrace and cherish your public. Embrace and cherish videos that people want to shoot videos coming in, nothing but a problem

with this group and with the CPUC.

So, we got to get rid of that. We want to make it be embraced, put the meetings in the area, have lots of cameras in the room. It should never be a problem. And that includes the CPUC meetings, which currently we have a dispute about the cameras in the room.

And I must say, Commissioner Florio, I was disappointed that you kicked the camera out the other day, out of the room.

So, that has to go. No more kicking cameras out. No more not embracing the public. We want to get these meetings down in the area and cherish the public involvement.

This is your big opportunity. They want to come on board, embrace it. Thank you.

COMMISSIONER MC ALLISTER: Thanks for coming.

MS. KOROSEC: All right, our next speaker is Doug Devine from Eagle Crest Energy.

MR. DEVINE: Yeah, for the record my name is Doug Devine, I'm CEO of Eagle Crest Energy.

Thank you, Commissioner McAllister and the members of the panel for hearing my testimony and comments today.

As the presentations and discussions today has emphasized replacing the capacity represented by the

once-through cooling facilities, and San Onofre, while maintaining our commitment to a reduced greenhouse gas future is challenging.

I want to talk about a subject that only got kind of short discussion today and that's the ability of cost-effective bulk energy storage to solve a part of the problem.

I believe that using our vast solar resources in Riverside East and Imperial County, plus pump storage, plus some additional transmission can reduce the need for natural gas-fired generation to solve the SONGS problems.

Now, the most widely used, most reliable, lowest cost energy storage is pumped hydro.

California has benefitted over the last decades from pump storage facilities at Helms and Castaic, among others.

And recent technological advances in the pumping control technology now has new pumped hydro facilities to meet many of the future needs of the California electric grid.

For example, new bulk storage facilities in Southern California could provide low-emission, flexible capacity, ancillary services and energy storage services that could reduce the potential renewable over-

generation problem.

Now, Eagle Crest Energy is developing Eagle Mountain, which is a 1,300 megawatt, advanced pumped hydro storage facility at the old Kaiser Iron Mine, 60 miles east of Palm Springs.

Estimated to come on line as early as 2020, Eagle Mountain, utilizing an advanced technology, can ramp as fast as 10 megawatts per second, and I'll be citing their existing transmission corridors.

Again, we believe that the combination of Riverside East Solar, Eagle Mountain, plus additional transmission facilities offers a low-cost and low-emission solution to reduce the need for additional gas-fired generation in Southern California.

However, current policies in California don't create the opportunity or playing field for cost-effective energy storage projects to be considered for capacity and ancillary service needs.

You know, the existing barriers to entry for pumped storage, we don't understand why California would exclude the most cost-effective, widely implemented energy storage technology from helping California be at even higher levels of renewable energy generation.

However, Eagle Crest looks forward to working with the PUC, the ISO, the Energy Commission, the Air

Board and others in developing and implementing policies which recognize the benefits of bulk energy storage and bring those benefits to the ratepayers of California.

Thank you for this opportunity to make these comments.

COMMISSIONER MC ALLISTER: Thanks for coming.

MS. KOROSEC: All right, next we have Rochelle Becker from Alliance for Nuclear Responsibility.

MS. BECKER: Actually, I'd just like to speak as Rochelle Becker, a San Diego Gas & Electric Company ratepayer.

I want to talk to you a little bit about energy efficiency and putting energy efficiency programs in the hands of the utilities that just cause the problem.

And putting it in the hands of the utilities that have to come up with a solution that we're going to have to find a great deal of funding for.

We have an organization called the Sustainability Center, in San Diego, who could work on these projects. We have private industry who has actually gone out, with venture capital, to create solar on rooftops and energy-efficiency appliances.

We'd like to see opportunities for something besides the IOUs to solve the problems that they've created.

I don't believe that energy efficiency programs have worked as well as they possibly could in San Diego.

I live down there. I live in a 500-unit condo complex, with four swimming pools. They've never heard of an energy-efficiency program, much less demand response.

Most of my friends, and my daughter's friends, and my granddaughter's friends who live in San Diego County have also not known about this.

The only offer that we have had is changing a light bulb. Well, there are many more opportunities than that.

We know we incentivize the large appliance stores to tell us what the appliance usage -- what the energy usage is. We also know that those signs aren't there.

I think if you used the resources that you have in San Diego County, which are excellent, and have them organize, you would have the community involved.

The community could see how well they could save energy. And then if we can't save enough energy, which we probably can't save enough, we would understand a little more about having to pay more for other energy costs to bring in capacity.

So, I'd like you to seriously consider something

besides the IOUs being in charge of energy-efficiency programs. Thank you.

COMMISSIONER MC ALLISTER: Thanks for your comments. I live in San Diego, too, by the way.

MS. KOROSEC: All right, next we have Nicole Capretz, Environmental Health Coalition.

MS. CAPRETZ: Nicole Capretz with Environmental Health Coalition. We also are from San Diego and we came up today because we are very concerned about what's going to happen now that SONGS is shut down.

We are a low -- we are an environmental justice organization representing low-income communities of color. Worked in the San Diego, Tijuana region for the past 30 years and we've been highly engaged in energy issues.

And we are engaged on the technical level at the PUC related to the efficiency proceeding, related to the long-term procurement plan, related to the storage proceeding. We're invested in trying to participate in kind of a dispassionate analysis of how do we navigate the road from this point forward.

But I think what we have heard today, what we heard in the Senate hearing, what we're kind of hearing behind the scenes is that there seems to be still a focus that's wedded to the fossil fuel path.

And I think that's really concerning to us because we represent the vulnerable populations that are going to be most impacted by a changing climate.

And I know I heard you, Commissioner Weisenmiller, talk about how we're going to have more 1-in-10, you know, the heat is only getting higher. But guess who's going to be the most impacted? It's kids, it's the elderly, and it's the most vulnerable populations in the low-income neighborhoods.

And I think that's kind of the element, the kind of moral public health crisis that we're confronting that bothers us the most.

Because there seems to be huge opportunities and ways to go a different -- to carve out a different path for our energy system, to make our -- to modernize our grid, to focus more on the micro grid, just develop a lot more of the resources that some of these folks here at the table today were discussing in terms of the efficiency, demand response, all those technologies.

But it feels like there's still sort of a -- kind of just a symbolic commitment to those resources. And maybe that's not how you all are interpreting it, but just to let you know, from our perspective it's challenging. It's even challenging to see that, you know, a few months after we went through the whole Pio

Pico process we're now confronting the same challenge of building a really polluting fossil fuel plant.

So, I think also what has been said today about how here we come all the way from San Diego, driving two and a half, going to be driving, you know, back in the traffic for two and a half hours, how committed we are in San Diego to figure out a different solution. And we've love to have a hearing in San Diego because, obviously, we're just representing a small microcosm of the community.

Also, we would love to see within the LTPP a scenario, a fossil-free scenario that's modeled out.

We understand that it seems ambitious. It's like oh, my gosh, how would we ever do that or implement it, you know, in time or with the existing challenges. But at the same time I feel like we have to push the envelope and we have to push everybody to think differently.

And I think you also heard that from some of the speakers about how -- you know, looking at what the Mayor of L.A. is doing, kind of thinking outside of the box and pushing through kind of new pathways we need to kind of work together to think about doing those at the same time. Thank you very much.

COMMISSIONER MC ALLISTER: Thanks for coming.

MS. KOROSEC: All right, next Harvey Eder from Public Solar Power Coalition.

MR. EDER: Good afternoon. I'm Harvey Eder with the Public Solar Power Coalition. And I'm here to talk to you about what we need is immediate, total solar conversion with solar renewables.

The sun makes the wind blow, the water flow, and the plants grow. It's the way the world works, it's the engine of our ecosystem.

About 35 years ago the idea was circulated in the State to set up a "Solar Cal." That's when the Governor was Governor in his younger days. It should be brought back. And now we have the technology that's available. The price of solar has gone down.

With the Chinese killing our domestic and European markets, the price of borrowing money now has gone way down. That's what's holding our economy up, $85 billion through the Fed helping the housing resources and boosting the stock market. That's a trillion dollars a year.

If that kind of money can be used for the country to buoy up our economy, it can be used for solar conversion to electric renewables and hydrogen.

PG&E's putting in a $50 million storage facility that will take the wind out of the Tehachapis and store

it underground. And this is not done in salt domes or in line, it's just in conventional storage facilities for natural gas, which we have abundance of around the State here.

Commissioner Florio told me, after a meeting in San Diego, about three months ago, on SONGS, that during the energy crisis about ten years ago the idea circulated that PG&E was going bankrupt. Edison was just on the verge of going bankrupt.

John Bryson, President Pro Tem of the Senate came up with the idea of buying out all of the transmission and distribution lines for a dollar. It looked like the Governor was going to go for this and it was in play for a couple of weeks, and nothing happened to it.

Right now, if they're being stuck with the cost of this plant and of decommissioning it, and if this happens to Diablo Canyon as well -- I was arrested in '78 with Diablo Canyon and active with Diablo and the alliance.

They're bankrupt, the system is bankrupt. We've got the ability to change it now. We need to have a five and/or, in the worst case, a ten-year solar conversion plan. Thank you.

COMMISSIONER MC ALLISTER: Thank you.

MS. KOROSEC: Next is Robert Cabrales from Communities for a Better Environment.

MR. CABRALES: Good afternoon, Chairman. Robert Cabrales with Communities for a Better Environment, I'm a resident of Huntington Park and have been working with CB for 11 years, now.

We're very happy to hear the news from the SONGS closure. I think this is now an opportunity for us to start planning and making meaningful strategic planning to move away from dirty sources of energy.

I also am concerned with this whole, you know, talk about natural gas power plants as a solution to replace nuclear.

We've fought two power plants in the last ten years in Southeast L.A. communities. One in 2000-2001 during the "energy crisis" and then in 2006 through 2009 we've fought another one in Vernon.

And I think we are tired of fighting against bad projects coming into our community.

And we only say bad projects because of the amount of pollution that these projects come with.

In communities that already have an overburden amount of pollution or cumulative impacts, it's concerning that these projects get chosen to be built in our communities.

And this is fair to say that this is throughout the State of California.

So, we do not want to see any more of these power plants. We do not want to fight them. We will fight them if we have to, but this is not something that we want to do.

We want to work with the different agencies to start planning for meaningful energy production.

There is a big need for energy efficiency and conservation in our communities. Our communities are able and capable of doing these, but only with a little bit of support in our communities to meet this.

Last year we were working with our community members to push for AB 1990, a bill that would bring some of these projects, solar projects to our communities. At the last minute the utilities, including Edison, who was very well at putting all their energy in -- well, energy, no pun intended -- to actually crush this bill.

And I think this is a sign that the utilities are not committed in moving projects that are actually going to improve energy production, clean energy production in our communities.

I mean we have an abundance of parking lots, and rooftops, and warehouses in Southern California that we

could be using some of this space for energy production, and like I said green energy production.

So, I mean we're happy to see that SONGS is no longer in the picture, but we definitely do not need any more dirty, polluting power plants.

So, thank you for your time and we look forward to hearing more of these conversations here. Thank you.

COMMISSIONER MC ALLISTER: Great, thanks for coming.

MS. KOROSEC: Next, Kris Kim from Bloom Energy.

MR. KIM: First, I wanted to thank the PUC and the CEC for putting this joint workshop together.

I think one of the solutions that we really haven't discussed much today is the use of clean, reliable, targeted distributed generation resources.

Given the needs of the local capacity and voltage support in the L.A. Basin and San Diego, we'd like to see stronger consideration of these clean, reliable DG sources.

Many of these technologies are CARB 2007 compliant. They did not use water during normal operation and can quickly be deployed in targeted regions and locations.

We believe these DG technologies can be a strong option and a great solution in this new energy model for

California that Commissioner Florio mentioned before.

Thank you.

MS. KOROSEC: Next is Pete Hasapopoulos, Sierra Club San Diego.

MR. HASAPOPOULOS: Good afternoon, I'm Pete Hasapopoulos with the Sierra Club San Diego Chapter, 12,000 members.

Commissioner McAllister astutely asked SDG&E, after a few of their presentations, if looking at preferred resources analysis, I'm paraphrasing here, but is it in their game plan; where is it?

And we ask that every time they come forward with a power plan because it's never there. It's a few sentences.

If you look at the recent reapplication for Pio Pico, we looked at it, it's not cost-effective for our customers, end of story. That's not an analysis.

So, we ask you to raise the bar on that as, hopefully, Commissioner McAllister was doing in that instance.

Commissioner Florio, in San Diego a few months ago, as the PUC rejected the first iteration of Pio Pico, said, we have two to three years here to look at, you know, to give alternatives a chance to get the job done.

But, apparently, SDG&E did not hear that because they're right back, ready for fossil fuels. And here we are in the museum digging up fossils. And that's, I guess, why they're here.

(Laughter)

MR. HASAPOPOULOS: So, and Commissioner McAllister had also said -- I think you said you're looking for similar fruit. You'd like to see the preferred resources really -- to be able to look at the pros and cons and lift it up to what we seem to spend all of our time on.

And to that effect we'd like to echo what the Environmental Health Coalition said, that we'd like to ask you to model a fossil fuel-free scenario, and to take this seriously, please.

We have engineers, too, fortunately, at the Sierra Club. And I want to highlight a few things from a fact sheet, of what should have been distributed to, that put things in perspective from the San Diego arena.

Pio Pico, one of the gas plants that SDG&E would love to get built, $1.6 billion to ratepayers. And one of the topics here was to take care of ratepayers here today, $1.6 billion.

The *Union Tribune* did a story after the last big blackout in 2011, and talked to some experts who

estimated at the high end the blackout cost $118 million, you know, in economic costs. But we want to build -- or SDG&E would like to build a $1.6 billion part-time power plant. So, that seems out of whack to us.

NRG has 200 megawatts of peaker plants around Carlsbad. SDG&E owns the land, but is not inclined to renew the least. They need to renew the lease. That wasn't mentioned today.

SDG&E had reserves of about 24 percent during the hottest hour of the year on September 14th, 2012, without San Onofre, 24 percent.

I will be very quick here. We are not using our current power plants to the fullest. San Diego's two largest, new round-the-clock gas-fired plants, Palomar Energy Center and the 600-megawatt Otai Mesa, they can operate as peaking units if necessary, when part of the plant is down for repair, but this is not recognized by ISO.

For the long term, ISO has identified a low-cost, non-generation fix for San Diego in its March 2013 transmission plan, page 190.

"Approximately 700 megawatts of generation in San Diego can be displaced by additional reactive support, transformer upgrades and 66 KV transmission

upgrades in the L.A. Basin, and upgrading line series capacitors and additional transformer upgrades," et cetera, et cetera.

So, please review our fact sheet. There are a lot of things that were not in the mix.

SDG&E, in the Pio Pico proceeding, did not mention power coming in from Baja California. You will see that in the fact sheet. It was left out of the proceeding. And in other instances they bring it up to their advantage.

So, there are a lot of discrepancies, a lot of omissions and we encourage you to revisit this whole subject of purported need in San Diego and what the correct solutions are. Thank you.

COMMISSIONER MC ALLISTER: Thanks, thanks to you.

MS. KOROSEC: All right, next we have Nancy Rader from California Wind Energy Association.

MS. RADER: I'm a little short. Good afternoon, Nancy Rader, Executive Director with the California Wind Energy Association.

First, I just wanted to echo DRA's and others' comments today that an integrated approach to resource planning and procurement will better meet system needs and will meet those needs at a lower cost.

We really need to get away from the siloed procurements, separate processes for renewables, system capacity, local capacity, flexible capacity, et cetera, and move towards all-source procurements where all types of resources can compete based on each of their strengths.

Then the utilities and the PUC can optimize among all of those resources and meet the various system needs that we have at the lowest total cost.

It does not make sense, for example, to acquire capacity or flexibility for renewables if those services can be acquired at a much lower cost from other resources.

And this is particularly true of major upgrades to the transmission that are required to access renewables that are fully deliverable to any point on the grid, and cost tens of millions of dollars to build.

In this context, yes, it may make sense to build a few gas plants in Basin that don't operate much. Pump storage hydro also would make more sense in this kind of context where all needs are considered at once.

And, of course, this planning should take place in the context of the State's long-term greenhouse reduction goals, where carbon prices are going to get a lot higher as those carbon caps become increasingly

stringent in 2020, 2025, 2030, so we really need to take the long-term view.

So, we were disappointed that Judge Gampson rejected the motion we filed jointly with two solar associations a couple of weeks ago to expand the discussion of the track 4 LTPP proceeding beyond looking only at the local capacity impacts of SONGS closure.

I have to say I didn't understand -- I really didn't see a response in the ruling to our call for a more holistic look at the situation.

But when we do look beyond the local reliability impacts of SONGS closure and consider the contribution to overall system reliability and to greenhouse gas goals that SONGS provided, it will be important, really important to carefully consider whether transmission upgrades will be needed.

In particular, it's very important to recognize that the PUC has never established criteria for the standard that deliverable resources need to meet. And that the Cal ISO's deliverability methodology is significantly more conservative even than the PUC's adopted methodology for establishing local capacity obligations.

It may be that using a rational deliverability standard we will see that we can supply a good fraction

of system reliability needs with already existing, as well as new renewables and other resources from outside of the local are that SONGS served, and that we can replace SONGS greenhouse gas-free power with additional renewables located outside of the L.A. Basin. Thank you.

COMMISSIONER MC ALLISTER: Thanks, Nancy, for coming.

MS. KOROSEC: Next is Valerie Winn from PG&E.

COMMISSIONER MC ALLISTER: I want to just chime in quickly and just make sure, you know, we really, really appreciate everybody's comments. And I'm assuming everybody who's spoken is going to submit written comments, but it would be nice to sort of see that.

And to the extent that extemporaneous doesn't quite do your ideas justice, it's always nice to sit down and write something out that makes sure that your points are there, and cogent, and sort of usable, in usable form for the various commissions that they're going to go to.

So, I just wanted to make that point and emphasize it.

MS. WINN: Good afternoon, Valerie Winn with Pacific Gas & Electric Company.

I just had a few brief comments I wanted to make. I did want to respond to some comments made by Mr. Geesman on the seismic safety of PG&E and whether we were -- the Diablo Canyon Power Plant was in compliance with its license.

And I wanted to assure you that PG&E is in compliance with its requirements from the Nuclear Regulatory Commission for the seismic safety requirements at the Diablo Canyon facility.

There is a public process that is going on right now, it's called the SSHAC, Senior Seismic Hazard Analysis Committee, and that PG&E has made its participation in those hearings completely open to the public.

So, I would welcome people who have questions on the seismic issues at Diablo Canyon to participate there.

We've also noted in our comments to the CEC, earlier this month, a variety of opportunities for the public to participate in those seismic safety discussions, including through the Diablo Canyon Independent Safety Committee, through the SSHAC process and through numerous other public hearings.

So, I wanted to emphasize, again, we are in compliance with our license.

I also wanted to acknowledge that we have had two recent outages at Diablo Canyon and in both cases the unites operated as they were supposed to and shut down safely.

The first incident was at the end of June and there was a minor leak in the containment building, not related to, you know, the nuclear operations, but a leak that we shut down safely. We fixed the problem and it came back on line in early July.

And just recently, I think in the last few days, unit 2 was shut down for a few days because of an issue on the non-nuclear side of the facility, with some arcing during some hot washing of the insulators.

So, I understand unit 2 is actually parallel to the grid now and should be back at 100 percent by later today or tomorrow morning.

So, I'm happy to answer any other questions you might have. But I did want to emphasize that we do take the continued safe operations of that facility very seriously and thank you.

COMMISSIONER MC ALLISTER: Appreciate that, thanks for coming.

MS. KOROSEC: Next is Jeff Gates from Duke Energy.

MR. GATES: Hi, thank you again for the

opportunity to speak here. I guess in general I was -- if we have all of the above, I don't think we can do anything with either only solar, or only wind, or only gas, we've got to do it all.

But I just wanted to offer a little bit of perspective as a developer on the, at least one of the largest battery storage projects in the world, a 36-megawatt project down in Texas.

In answer to some of the questions that were asked earlier, I think Commissioner McAllister asked why is there a maybe next to can we provide reactive support?

And I think the answer is yes that certainly, at least in the case of ours, we have no problem doing a full fork power at 36 -- anywhere from zero to 36 in any of the quadrants.

I think it's a very good solution and it's one of the advantages that storage has.

And again, there was another comment today that storage does not actually produce megawatts and that is certainly technically true, it doesn't. But I think if you think about an analogy, go back to the early days of the light bulb, when that was the primary use of electricity, why all of these companies are Edison in their name because it was the light bulb that drove the

electric industry. They only ran their generating plants at night.

So, you had a 50-megawatt plant, it could provide 50 megawatts of lighting at a time.

You put a 50-megawatt battery and now you have a 100-megawatt generating facility. So, it's not generating electricity but your effective capacity is now doubled because you have storage on the system.

And load is not flat. So, the duck picture, it may not be right, but we do know that load goes up and down over the day, so you're making all of your other generation a lot more effective by utilizing storage.

I guess in terms of cost effectiveness, I want to cover a couple of points.

First is what are the right metrics because how do you measure cost effectiveness when it's something that's new.

Think about flexibility storage as two times the megawatts because we can go up and down, so a 50-megawatt gas plant and a 50-megawatt battery, the battery's effectively 100 megawatts because it can go up and down.

You talked about, you know, one to two billion dollars for a 60-mile transmission line, 500 KV to get into San Onofre. I can build you a lot of storage for

$2 billion and it would provide a lot of the services that you need in that location.

And then, third, somebody mentioned the cost of the blackout in San Diego. I'm not sure that I believe the $118 million. I would like to say if we avoid that, what is the real cost of avoiding major blackouts in metropolitan centers.

Two, storage is very flexible. It can provide many different uses, and that's both good and bad. The hard part about it is it makes it very difficult to capture all those value streams.

But three, the one thing about cost effectiveness is I can get it done. See, I have a lot where I can go build something that has the footprint of a, you know, shopper's warehouse, or a large home improvement store. I can put enough storage in there, in the L.A. Basin, anywhere you need it, and I can provide storage in the capacity that you need. I can permit it in several years, rather than in eight years.

So, I think that that's a huge advantage when you talk about cost effectiveness is what's the opportunity cost of not having it there?

And it's very hard to measure that, but I think we need to think about that as we go forward. And I really applaud you for the CPUC storage proceeding that

is ongoing, and hope to file comments on that. Thank you.

COMMISSIONER MC ALLISTER: So, I would just encourage you to put some numbers and maybe some rigor to that, to those thoughts, and put them in one of the proceedings we're talking about here, whether it's in the IEPR one, or at the PUC directly, or both.

I mean to the extent that ideas for how to quantify the benefits are useful to have, it would be helpful to have a relatively sharp pencil and some rigor behind that thinking.

You know, you may be in a good position to do that, to help the rest of us figure it out. So, just want to encourage you to do that.

MR. GATES: Okay, yeah, happy to do that.

(Off-mic comment)

COMMISSIONER MC ALLISTER: You know, I think it's probably not necessary strictly here, but feel free to put that in your written comments and then you'll have it for your bedtime reading.

(Laughter)

MS. KOROSEC: All right, next we have Leonard Pettis from CSU.

MR. PETTIS: Good afternoon. I want to thank you, Commissioner McAllister, Commissioners Florio,

Weisenmiller, and Jonathan from the Air Resources Board.

A lot has been said and I agree with most of it. One of the things that, you know, to quote one of our institution's greatest minds here, we're not going to solve this problem with the same mind that created it, so I really do appreciate the attitude that you've come to listen to others.

But I've been doing this for a long time and so I hope some of the things that you've heard today, not necessarily from me, but from others are really taken to heart and that some action is taken.

So, one of the gentlemen that spoke earlier spoke about bending the utilities' model and I think that's something very important for all of us to consider.

And I'm not saying that we should, you know, repeat some of the mistakes that were made in the past, but look forward.

And so one of the things that we haven't talked about today are several things, but I'll point to about three of them.

So, if we think about bending the utility system's model, whether it's public or private, let's consider along with -- I'm sorry Chair Nichols is not here because, certainly, she is a champion of forging

new policy and new ways of doing business with cap and trade in California.

So, if we consider that model to be a potential success, why not put a value on a megawatt and create a real market for energy efficiency. So that you can get the creativity from these folks that sit here behind me, that are not part of the minds that created the power system that we have in the State, now, but they're end users of it. And they have some great ideas and some great solutions. So, that's one.

One of the things that was also not talked about today is looking at our existing capacity.

So, at California State University, for example, we had a great plan and, unfortunately, it wasn't funded.

And that great plan was based on some very simplistic things, using forward-thinking analytics to basically make 23 campuses micro-grids that would deliver 10 megawatts of permanent demand right now, in about a year and a half implementation time. And it would employ about 1,500 people permanently.

So, that's one of the things that we'd like to continue to pursue and to get their help with, but there's some regulations in the way. So, that's the third barrier.

So, I really would encourage you, tongue in cheek, but seriously throw out the reg book. Throw it out and let's reinvent it. Let's come back with some sensible. Because those regulations are based on not 20th century, but some 19th century provisions that we simply don't need any more and they're not really in existence.

So, we create more regulations which, to Chair Nichols' point, makes it more complicated. It doesn't have to be that complicated. We can make it simple and we can make it doable.

And so, finally, one of the other things in terms of capacity, there's a tremendous amount of capacity on our campuses and in the system that's wasted. And it's about 30 percent of the capacity that goes into transformation.

So, again, if we think about regulation, so I challenge my colleagues. We keep building buildings, new campus buildings in the 21st century based on 20th century technology. We have to stop doing that.

And part of it is in the electrical design that's over-designed and the capacity is under-utilized.

So we, as end-use customers, are in a position, in a unique position to have -- to strike a deal, if you will, a real partnership with the utility and say let's

disconnect at least 30 percent of that and give it back to you so you can reuse it.

So, if we take 30 percent of the capacity that's out there, how big is this problem? It completely changes the dynamics of the problem that we're trying to solve.

And so if you go on the -- or the realization that about 70 percent or so of the energy consumed in the peak times for the plants, for the long-term procurement plan that are out there, and 30 percent of that capacity is not really needed or utilized, then maybe we've solved the problem without much money at all.

So, I really encourage you to look at that and I will thank you for your suggestion, Commissioner McAllister, we will respond with some real points about how to do that. Thank you.

COMMISSIONER MC ALLISTER: Thanks.

MS. KOROSEC: Next, we have Jay Powell, Run with the Sun.

MR. POWELL: Thank you, Jay Powell, I'm on the Steering Committee of Run with the Sun, the San Diego Chapter

I want to thank you all for being here and all the testimony today. I've learned quite a bit.

I've participated in hearings previously and you have a copy of my written comments, I believe. Today, I'm just going to touch on a couple of those points.

Yesterday afternoon I had the -- on the way up here I stopped at San Onofre and had the opportunity -- the Sierra Club's mission is to "explore, enjoy and protect" and I had the opportunity to explore and enjoy that wonderful resource.

I'm here to the day, cut to the chase, to talk about protection. And really, I think if we have this technology that we can boil water with atomic fusion and throw two-thirds of the heat generated into the ocean, that we can figure out how to harness the sun's energy when it's shining and when it's not.

And in San Diego County we have 3,000 or, rather, 4,000 megawatts of rooftop solar, and 3,000 of parking lot, by conservative estimates, that we can be developing.

The technology is there. We've heard testimony from a number of people about storage, about the demand response, all of the technologies are really outstripping the regulatory situation we have. I think people recognize that.

So, it's really simply not acceptable because we have this kind of antiquated regulatory structure, and

these investor-owned utilities that really want to perpetuate these gas -- fossil-fueled plants, building those things and that we continue to site those.

Well, one of the things I kind of heard today, it sounded like there was a case being made that L.A. has too many air quality constraints and so San Diego's got to take a bigger load of building more power plants.

And we just went through, Commissioner Florio led the hearing on these power plants in San Diego earlier, and we talked about two or three years to deal with this.

We're moving on these issues in San Diego. There's a community choice aggregation which is being considered.

But if we load up the rate base with all this other stuff, we're not going to be able to make those viable alternatives work for us.

Really, my perspective, having worked in community development for the last 20 years, is a community-based perspective.

And I think, you know, if we look at communities and we start talking about addressing greenhouse gas emissions, energy use, energy saving on a community basis that we can take advantage of those rooftops, those developed areas.

And these urban areas can literally be pushing energy up out of neighborhoods into the distribution system, into the regional system.

And I would hope that is a system that Cal ISO and the Energy Commission, and you all are going to model. Take a look at that. There's some potential for that.

I really would like to echo, I think one of the comments was made earlier here about the utilities and the job they're doing on promoting energy efficiency. It's just not happening. It's just not acceptable in terms of that.

We need to have independent and other community-based organizations really doing that.

And really, finally, this is -- the decisions you're making are tremendously complicated, I recognize that.

But some of these decisions are -- you know, they're for the next generation. I'm talking about these 25-year timelines that coincides with a generation.

So, whatever we can do to assist in promoting these kinds of alternatives, we don't need the fossil fuels, it's not where we're going.

I liked the comment about we're in an archeology

museum here, we got to get out of the fossil fuels. Thank you.

COMMISSIONER MC ALLISTER: Thank you.

MS. KOROSEC: Next we have Martha Sullivan, the Coalition to Decommission San Onofre.

MS. SULLIVAN: Good afternoon. And I do want to thank you for having this today. It's been a very informative day. The last panel, particularly, I found, you know, wonderful insights, and ideas, and suggestions for you.

And I just want to sign on with everybody else that has basically said, you know, right now we need to be adapting our grid and our energy system to our future. Not, you know, designing it around the constraints of our past.

And, unfortunately, the gatekeepers have an extremely high financial incentive to keep things the way they are.

And I just want to point out, specifically *Houston Chronicle* has reported that the average annual compensation for utility executives rose 150 percent from 2000 to 2011. Specifically, for Southern California Edison and SDG&E, the chairman, president and CEO compensation increased 15 times from 2000 to 2011, from $725,000 to almost $11 million a year.

For SDG&E, the chair and CEO in 2000 made $954,000 total compensation. That increased four times. Not as much as Edison. To in 2011 it was almost $4 million total compensation.

So, clearly, clearly the investor-owned utilities do not need your help to keep them in the lifestyle to which they've become accustomed.

We, the ratepayers, do need your help because we're struggling to maintain even a shred of the life we're accustomed to. So, please remember that in terms of your priorities. We need your help, they don't.

COMMISSIONER MC ALLISTER: Thank you for that.

MS. KOROSEC: All right, now we're going to move quickly to a couple of callers on WebEx. Can you open Barbara George's line?

Barbara, go ahead, you have three minutes.

Barbara?

Okay, we're having a little bit of glitch with the line here, let's see if we can get that. Hold on, Barbara, we're trying to fix this.

All right, we're going to continue to work on that Barbara, so hang on. We're trying to work on the system, so we'll start with some of our other speakers and then break back to you when we get the problem cleared up.

The next speaker will be Roddy Jerome, Environmental Health Coalition.

MR. JEROME: Hi, my name is Roddy Jerome, I am with the Environmental Health Coalition. I'm actually a resident of City Heights area. And this is my first thing so I'm a little nervous here.

COMMISSIONER MC ALLISTER: Take your time, no pressure.

MR. JEROME: I just want to emphasize, you know, as living in an area where the climate will be affected most, you know, in the area that we're living, you know, we don't really see a lot of attention as far as like, you know, all the energy-saving buses are in the north area. We don't really see it in the south.

We don't see a lot of the, you know, tools that you could use towards that side. I wonder why that is? You know, they're only starting to change the transportation system to better it on the south, now.

I do a lot of transporting on the transportation system and so it affects us a lot. And we don't want fossil fuel, we want green. Green, promote green because green is better for low-income. So, thank you.

COMMISSIONER MC ALLISTER: Thank you very much for coming.

MS. KOROSEC: All right, we're going to go back

and try with Barbara again. Barbara?

MS. GEORGE: Yes, hello.

MS. KOROSEC: Yes, we can hear you. Go ahead, you've got three minutes.

MS. GEORGE: Oh, goodie. Hi everybody. I'm sorry I can't be there today. I'm the Executive Director of Women's Energy Matters.

(Inaudible)

MS. GEORGE: -- for a little over a decade I've been in energy efficiency, procurement and transmission proceedings.

And it really might be the single pork chop taking place. In a long-term procurement proceeding in May 2011, proposed for California to convene expedited workshops to start planning how to replace nuclear power just in case California's nuclear was unavailable for any reason.

And we would like to recommend that Diablo be considered as well. We thought that a planning process was necessary in order to ensure that preferred resources are used in replacement to keep greenhouse gas emissions in check and prevent air pollution in the dirtiest air basin in the country.

Now, I've heard a lot of talk today about preferred resources being a priority, but when it comes

to making procurement decisions, that's a different story. Rather than following the loading order, in paragraph one, mandated a minimum of 1,000 megawatts of gas plants for immediate procurement, versus a minimum of 160 megawatts for all preferred resources, and 50 megawatts of storage.

They put Edison in charge of determining what preferred resources could be used by funding them. There is no process for market participants to apply. There was no opportunity to bid.

The entire universe of preferred resource providers was excluded from a backroom process controlled by Edison, with the lights out. And I think this is a serious problem and it needs to be addressed.

Edison has been saying for a while that it has a preferred resource living pilot, but this appears to be a secret in-house process. There have been no notices to the services on when or where to apply.

And when I searched for this living pilot on SCE's website, there's nothing there.

Mr. Nelson of SCE mentioned that he had a chat with EnerNoc and then he said we need to get people in here from the real world and tell them what's really needed because those things won't work for ten years.

So, Edison appears to be incapable of

visualizing preferred resources that would work.

In the procurement proceeding then it was requested that CPUC and ISO define the criteria for what's needed. That didn't happen.

So, now, Edison can give a subjective opinion that nothing exists to meet any criteria.

This is the same problem we had in 2012. The process of determining the portion of power was all in secret backroom deals. No solicitation, no public process, no opportunity for the market to come forward to offer resource solutions which they understand. There were just a couple of high-level meetings where the CPUC, the Energy Commission and the ISO blessed these backroom deals. That appears to be happening all over again.

The Governor's Task Force excludes the preferred resource providers and the public.

Now, we all know that energy efficiency and solar can replace nukes. That's how Rancho Seco was replaced a quarter of a century ago. It's not really rocket science.

And the fact of the matter is the Public Utility District rates remain 20 percent below PG&E's. I cannot figure out why LADWP will need a huge rate increase in return for residential energy efficiency.

So, in conclusion, CPUC must take this out of the backroom and out of Edison's control. Line procurement and guidelines for each identified need, energy capacity, resource adequacy, ramping, load following, et cetera and hold a third procurement auction for preferred resources for the then long-term procurement horizon.

And make it possible for demand side resources to participate. Thank you.

MS. KOROSEC: All right, next on the WebEx we have Donna Gilmore.

MS. GILMORE: Can you hear me?

MS. KOROSEC: Yes, we can, Donna.

MS. GILMORE: Okay, great, yeah. I live in San Clemente, so I'm right in the area that everybody's talking about.

And one of my concerns is I want to make sure that we've learned the lesson that nuclear power can't be relied upon.

And we have a plant across the border in Arizona, Palo Verde, and I notice from some ISO documentation that a lot of the transmission lines may be going in that area.

And I don't if I can ask questions or just comment. I just want to make sure that we're not

becoming dependent on Palo Verde nuclear energy and, you know, making the switch from San Onofre to Palo Verde.

Palo Verde has a very high safety complaint record, a very high retaliation record from employees.

And if it wasn't for San Onofre they would have a really bad steam generator plug 2 break, also.

So, there may be some concerns there.

And then, of course, we have Diablo Canyon with an unknown -- excuse me -- with an unknown -- or an unknowable earthquake happening, when and at what magnitude, and no scientist knows.

Anyway, so those are my comments. And if there's somebody there from the ISO that could answer the question about if we are going to be more dependent on Palo Verde and do we now have a plan that if Palo Verde goes down we're not going to be vulnerable right now?

CHAIRPERSON WEISENMILLER: I think at this point we're trying to limit things to comments. Certainly, on a technical question, Palo Verde is fully contracted, although certainly some of its power comes to California.

MS. KOROSEC: All right, next back to those of you in the room. We have Gabriel Guerrero from CBE.

MR. GUERRERO: Hello, my name is Gabriel

Guerrero. I've been living in South Gate for the last 30 years and I'm a member of CBE, Community for a Better Environment.

And, okay, what I'm suggesting to you guys, understand for generation roof solar program, a thousand mega ton, much peak electricity in the amount on the paper every year for power or people.

This is pollution. This is much less pollution than for paying utilities for massive centralized power plants. Utility claims we need natural gas plants to backup solar power when the sun goes down. But the studies show solar matches or peak electricity with this during the day.

That's it.

MS. KOROSEC: Next, we have David Weisman, Alliance for Nuclear Responsibility.

MR. WEISMAN: Good afternoon, David Weisman, Alliance for Nuclear Responsibility. And sitting here today or sitting here today is almost a represe of last week's Senate Energy Hearing, Chaired by Senator Alex Padilla, where many of the same questions, if you want to call this the San Onofre postmortem was conducted.

And in case I don't remember whether Chair Weisenmiller and Commissioner Florio left before the public comment was done, but what I pointed out, without

intending any irony to Senator Padilla was to read back to him, into the record, his very comments two years before where he had conducted yet again the same hearing, and asked the very same tough questions of the utilities about the intended reliability of their nuclear plants.

And as a brief recap, the answer from the Edison spokesperson at that meeting was that the likelihood of San Onofre going down was so unlikely that you really wouldn't play it forward. Any more than if you had to use your car to go to work, you wouldn't buy a whole second car to have available just for the one day when your car didn't work.

And representative of Edison's answer -- excuse me, the representative of Pacific Gas & Electric's answer was that, frankly, we hadn't run those numbers. But, Senator, he said, I can get those for you if you like.

And again, without intending any irony, I had to remind the Senator that I wrote his staff a couple of months later and asked if he'd actually gotten those answers or asked for them. And the answer I got back from the staff was no, we have not.

So, here you are two years later actually having his, what were at the time, prescient questions, sadly

answered in the affirmative.

Well, what I notice is there seems to be a real inertial lag in the ability to get those answers so we don't find ourselves conducting a postmortem like this, for example, any time soon on Diablo Canyon, without adequate preparation.

It's made me think that perhaps the next place that you should consider permitting and installing a synchronous condenser is in the State Capitol, so that the low voltage murmurs can somehow be transformed into actually high-energy actions.

(Laughter)

MR. WEISMAN: Now, to your credit, the Energy Commission has been asking these questions since the AB 1632 study in 2008. And regardless of statements to the contrary by PG&E, there remains serious seismic questions unanswered from that study, which we'll now be going on five years. And to avoid having to have such a postmortem discussion any time soon on Diablo Canyon, it would be a suggestion that if the Legislature seems to have that inertial lag and low voltage to make it happen that the Energy Commission and, certainly, because they only recommend, the Public Utilities Commission, through much more declarative actions can make sure that we have those seismic answers to us in a forthright time, in a

timely manner. And that we don't find this two-year lag persisting. Thank you very much.

MS. KOROSEC: Next, we have Dalia Palacios from Sierra Club.

Go ahead.

MS. PALACIOS: Oh, sorry, just waiting for you to start the time.

MS. KOROSEC: Oh, that's okay.

MS. PALACIOS: Okay, so hi, my name's Dalia and I'm with the Sierra Club, My Generation Campaign.

So, basically, I've been sitting there listening to what's been going on. I have to say that we need more spaces, more transparency so the public can participate; actually, more communities because we're the ones that are affected by it and we're the consumers.

So, we have to be part of the solution and given an opportunity to figure out the transition. And the answer is not new gas power plants. We need and have many cleaner alternatives.

I agree that there wasn't enough coverage on renewable sources so, basically, like fossil -- like we need a fossil-free energy model. And I would just like to see you guys outreach because we are the ones that are affected by what's going on.

And My Generation focuses on renewable solar energy. So thanks.

MS. KOROSEC: Next, Julia May from CBE.

MS. MAY: Hi. I'm Julia May and I've presented testimony for CEJA and also for CBE in the LTPP.

And we wanted to say it's really important that this joint process take into account the detailed numbers evaluated in the CPUC process, especially the modeling.

For example, we just got a data response Friday, from CAISO, that indicated that CAISO isn't even using the 50-megawatt minimal energy storage that they were ordered or that was a result of the decision last -- or this year on the CPUC. It's a pretty minimal amount of energy storage, only 50 megawatts.

CAISO's not even using that in the modeling, let alone a more reasonable amount. So, we're not talking about huge amounts of energy storage. We're talking about even minimal amounts that have already been ordered by the Commission are not being included in the modeling by CAISO.

If you have any questions about that -- demand response, when we did our testimony last year we found very small amounts of the preferred resources. They've indicated that they're doing the same methodology this

year. They're using really unreasonably small levels of demand response, energy efficiency, almost no energy storage.

So, we're not talking about asking you to model pie-in-the-sky amounts of renewables. We're saying even if you do reasonable amounts that the State is forecasting for 2020, the need is very likely to go away.

Another quick comment about flexibility, there's a lot of assumption that gas equals flexible resources, assuming that fast-ramp gas is what we need.

There was an evaluation done last year, or presented by E3 called the Deep Dive Study. They compared a case where they added all gas for the new resources needed to a high DG case. They assumed that the all-gas case will be a lot more flexible and they found out that that was wrong. So, they went back and looked at it in great detail with this Deep Dive Study.

E3 found that the high DG case actually needed thousands of megawatts of lower levels of resources than the all-gas case. And they figured out the reason for that was because solar was available during the critical peak hours so it freed up resources so existing fast-ramp resources could provide it where needed.

And so, that adding a bunch of gas doesn't

necessarily mean you have more flexibility.

The result of that study, the lessons learned provided at the CPUC workshop, in the slide by E3, said load imports, hydro production and renewable resource production during critical hours was much more important than flexibility.

So, they really emphasized the need to evaluate that.

We're really concerned that this gets brought up again and again, we need a lot more gas to offset renewables, or we need a lot more gas because our modeling says we need it.

When, in fact, the detailed modeling says not necessarily need a lot more gas for flexibility. And, in addition, if you actually model reasonable levels of preferred resources, the need is likely to go away.

So, we really hope to see this process look at the detailed CPUC evaluation and modeling, and require that CAISO model reasonable levels of preferred resources. Thank you.

MS. KOROSEC: Jim Stewart, Sierra Club.

MR. STEWART: Jim Stewart, Sierra Club. As Kristin Eberhard reminded us, we're in a global warming crisis. And, fortunately, Governor Schwarzenegger recognized that back in 2005 with Executive Order SO

305, which mandated that not only do we get to 1990 emission levels by 2020, but 80 percent below that by 2050.

And it's very clear that the procedures that are being followed by the three agencies represented up here are not on track to get to 80 percent down by 2050. And the CARB scoping plan says that they're going to look at, you know, some intermediate goals, 2030 or something like that, where you have to model how you're going to shut down these expensive, $1.6 billion effective cost of a peaking gas plant down in San Diego.

You're going to model that being shut down by 2030? I mean, in other words you've got to include that.

And I think that, I don't know, maybe you guys need a lawsuit or something like that. I'll have to talk to my Club people about that.

But you've got to have some way of reminding yourself that you're on a steep downward track, 80 percent down, right? And you keep asking for more -- approving more gas plants.

And the other thing I want to say is that there's something very strange about the EC demand model that it was going up, right, that was the third slide that CEC presented there.

And then, of course, the demand went down, so they shifted the thing down, but they still kept it ramping up. They shifted it down and it still -- the line is flat, right, now, since 2009. And yet, you still keep projecting it up as if no energy efficiency -- or I don't know how you deal away with energy efficiency, and the rooftop solar, and the demand response, and you keep having that demand go up so you keep getting more and more gas needed.

It isn't working for anybody.

And so then, I guess my final point is there's a huge black box. Nazemi, when he represented the Air Quality Management District here, was talking about the need to achieve the 2022 goals for natural gas. There's a huge "black box" that is waiting for future technology and, yet, you keep approving more natural gas plants in the L.A. Basin, killing our air quality.

MS. KOROSEC: All right, next is Patti Byrd, Environmental Health Coalition.

MS. BYRD: Good afternoon. My name is Patricia Byrd and I'm with the Environmental Health Coalition, and I'm here to ask you guys to help us get the dirty energy out and get the clean energy in because it affects everybody here.

And it affects my neighborhood, where I come

from, San Diego, and that's why we're here, we're trying to get all this stuff together. And, you know, with the help of everybody probably we can do this.

You know, let's not get into a box, let's not be arguing about it, or anything like that, let's get something done. Thank you.

COMMISSIONER MC ALLISTER: Thanks for making the trip.

MS. KOROSEC: Next is Michael Sarmiento, Sierra Club.

MR. SARMIENTO: Hello, my name's Michael Sarmiento, with the Sierra Club, My Generation Campaign.

So, I'm basically here today because our campaign has been really looking how can we bring more clean energy to California.

And I know that, you know, basically looking at it, you know, fossil fuels are -- it's a really bad model and we really need to transition out from that, and I think we all understand that.

But I think this transition is really difficult, right, because fossil fuels has been around for hundreds of years, so that's what our current model is based on.

But with renewable energy coming online, being more affordable, more cheaper it creates a different model and that's what we need to figure out.

And I think that what I really appreciate is having this meeting today, with having all of the different regulatory boards together, and also inviting the public.

But what I think what needs to be done is also there needs to be more public participation in this process, in this transition.

Because we are the consumers, we are the ones who actually -- who use energy. And we're also the ones who are the most affected by the results. We're the ones who are most affected by fossil fuels, by climate change, and by high prices.

So, I think it's important for the public to really participate into that process.

And I think it's -- it would be useful if this information gets out to the public more. Especially, like people have said that, you know, Edison has an energy-efficiency program, but people don't know about it.

People see solar energy, but they don't know about it. They see these things. They know about renewable energy, but they don't know about it, they don't know how it works.

So, I think it's really important if there is more spaces for the public to participate so they can

understand what's happening.

And really, just I also want to just echo what everybody is saying is that we really need to move past fossil fuels. You know, we've closed down SONGS and we need to move past nuclear energy and also need to move past fossil fuels and have a fossil-free energy model that's really based on renewable energy. Thank you.

MS. KOROSEC: Next is Jose Franco Garcia.

MR. GARCIA: Hi, my name is Franco Garcia. I'm with the Environmental Health Coalition.

And as you see, we came up here with a few people from San Diego. You know, a bit of a drive and we're all up here and actually representing many more residents that would be there. If we were able to have a hearing like this in San Diego, they would be there.

And, actually, I'm out every day talking to residents and it's very clear from residents that, you know, they're very ready to move forward. Looking forward, stop kind of using old technologies and going backwards.

Kind of everything, though, not just new technologies but as was mentioned earlier, things like energy efficiency, energy conservation that they see -- I mean most -- I actually talk to numerous residents every day throughout neighborhoods like City Heights,

Barrio Logan, National City. As soon as we talk to residents, they're very interested in doing as much as they can to converse their own energy usage and find out more about other programs, how they can continue to do that.

It's something they're very interested in. But they're also very interested in seeing -- you know, they've heard about solar, and things like that. It's kind of a distant thing that they hear about but, you know, they haven't really seen a committed effort, you know as was mentioned earlier, towards getting more of that done.

And, you know, any time that you hear about more -- you know, one thing that the people in those neighborhoods do see is more pollution, more dirty power plants, things like that. So, if they hear about more natural gas plants, or anything like that, they see it as a step in the wrong direction.

You know, and that's why a lot of residents came up with us here today.

But, you know, again, like I said, if this was in San Diego more residents would be there because of the importance that they see in it. Because it is something that as residents, who live in low-income communities, where most apartments, most buildings don't

have air conditioning, where there is not a lot of, you know, green spaces where there's shading, you know, and things like that.

And, you know, they see the problems with heat waves and all of that.

Climate change is going to affect more of our communities. You know, just it's affecting everybody, but it's definitely affecting our residents more.

And, you know, the hardest part about it, too, is that when those things do happen, when they -- residents see that when those things do happen, when there is health problems due to heat waves and things like that, residents in our neighborhoods don't have easy access to healthcare, either. They can't easily go see the doctor, you know. Most of the time it's emergency room visits and that's a big impact on the pocketbook, as we all know.

And, you know, these are the things that people are constantly thinking of.

And, of course, speaking of the pocketbook, of course any sort of rate -- you know, raises in the rates would be hard for most residents to deal with. But overwhelmingly, every time that I've spoken to residents they say that, you know, if their rates were going higher because they knew they were seeing more solar in

their neighborhood residents -- you know, statistically, actually we spoke to -- we did an unofficial survey last year where 70 percent of residents did say if they knew it was to see more solar in their neighborhood, or anywhere, to produce more clean energy they would be willing to pay. They said 10 cents more on their energy bill.

What they don't like to see is raises and they have no idea why. So, that's what -- residents are interested in doing their part as long as they know, you know, commissioners, utilities are also doing their part. Thank you.

COMMISSIONER MC ALLISTER: Thank you.

MS. KOROSEC: Next, we have Kayla Reyes from Environmental Health Coalition.

MS. REYES: Hi, I'm Kayla Reyes with the Environmental Health Coalition. And as Franco and Nicole have said before, we represent low-income communities in the San Diego area.

And these are the communities that are most impacted by climate change. You know, they have the heat island effect, where it's totally paved. They don't have a lot of green space, they don't have a lot of solar, but they're really ready and very supportive of clean energy technologies because of the pollution

that they face on a daily basis, and because of their concern about climate change.

And so we just have to ask, really, you know, at what cost are we going to keep continuing our model of putting more pollution and dirty energy into our atmosphere?

It's really just we see it as irresponsible to not be pursuing all of the clean technologies that we have, and storage, and energy efficiency, and DR and all of that.

So, we really look forward to crafting a holistic solution that uses modern technology. Thanks.

COMMISSIONER MC ALLISTER: Suzanne, how many more cards do you have?

MS. KOROSEC: I've got one more card. One on WebEx and I have to open the phone lines.

All right, next we have Olga Modano.

MS. MODANO: Good afternoon, I am here representing the Sierra Club and also Communities for a Better Environment, their youth component, Youth for Environmental Justice.

One thing I don't see is my community here, so that's kind of a sad thing.

I liked what -- I don't remember his first name, but I remember his last name -- that, yeah, we should

have more of these meetings in the community because they do need to be here and have their voice be heard.

One thing I want to mention is that last week, on youth from the My Generation Campaign, within the Sierra Club, we actually went to an Edison building in Rosemead, and we had several youth that were going to speak. And they were actually wanting to have a meeting with one of the directors there.

And I'm not kidding, only being there probably less than a minute, the building went on lockdown.

We were at least 30 of us and the majority of us stayed outside. We had signs. It was a peaceful action that demanded clean energy.

It was kind of funny because the people were just staring at us through the windows.

So, we were there for like 30 minutes and like five cop cars just show up, you know, the sheriff's, the police, they were there.

We weren't fighting because we knew that we weren't doing anything wrong just being there, holding up signs.

And we actually got the Communications Director to have a meeting with us.

Our youth wanted to be sat down in a room, so they can have five minutes of their time. But,

apparently, they have their meetings outside, right on the sidewalk, next to the street, right.

So, that was really interesting, that was the first time I've seen a meeting that way.

One of the things is also that our communities are affected by fossil fuels. And, you know, you are in smog city, this is L.A.

My nephew wants to see the stars. He can't really, so I don't know.

I do breathe the air. I suffer from bronchitis, myself. I've actually had bronchitis early this year for two weeks, and it kind of sucks because like I never know when it's going to come back because I'm breathing this air.

So, yeah, I think you guys should stop fossil fuels from coming into our communities and demand solar.

There is a barrier of lack of information that's not coming into our communities about it. We have to tell our parents, our people, our community that there is solar and that there is a probability that it can come to our communities.

We would like to see it mostly on public buildings. We see our schools that have solar panels, very few in our communities.

We want like elementary schools to provide solar

panels, but so far we've seen only junior high schools and high schools.

And we would like to see the local libraries, maybe like the post office, the city halls in our communities to provide solar energy because they're the ones that need it as well, but then slowly transitioning to using it for apartment complexes because in our communities of low income, the majority of the people that live there do live in apartment buildings, so we would like to see it there, too.

And, you know, houses, yeah, they need it as well.

Thank you for, you know, having me here and like listening. And I really like talking a lot, and I bore out.

(Laughter)

MS. MODANO: So, yeah, so I just want to say we're demanding clean energy and that's what we want in our community. Thanks.

COMMISSIONER MC ALLISTER: Thank you for coming. And I would just say it doesn't have to just be solar. You know, you can look for ways to get those buildings retrofit, upgraded. You know, the indoor air quality will improve and there's lots of benefits to doing general building upgrades, not just generation on the

rooftop. That's the tip of the iceberg. But you need to look for solutions to all of that stuff.

MS. MODANO: Yeah, but California gets a lot of sun, so you're at a Sunshine State.

COMMISSIONER MC ALLISTER: Yeah, absolutely.

MS. KOROSEC: All right, Lynette, you want to open Steve Zuretti's line?

Steve, your line's open, you have three minutes.

MR. ZORETTI: Great. Good afternoon, this is Steve Zuretti with the Solar Energy Industry --

MS. KOROSEC: Can you speak a little louder, Steve?

MR. ZURETTI: Hi, this is Steve Zuretti with the Solar Energy Industry Association.

MS. KOROSEC: Thank you.

MR. ZURETTI: Certainly appreciate most of the discussion that's already taken place today.

Sort of the focus has been on preferred resources. And on behalf of SEIA, I'd just strongly encourage any SONGS replacement plan to consider how to best utilize and maximize renewable energy.

Of course that includes solar energy, the distributed generation on the utility scale. These technologies offer the State clean, safe, affordable and reliable sources of energy that can help meet

reliability needs, importantly and particularly during peak demand times when the system is most stressed.

I'd also just briefly echo CALRIA's disappointment with the recent ALJ ruling that denied CALRIA, LSA and SEIA's joint request to expand the scope of track 4 of the LTPP proceeding.

In light of this ALJ ruling, I'd like to take the opportunity to again stress SEIA's view that this process of replacing SONGS needs to include technology such as wind and solar, in the mix of replacement capacity.

Because in addition to meeting the liability needs, deploying these resources cannot achieve the State's important greenhouse gas goals, as well.

So, thank you for the opportunity to speak.

MS. KOROSEC: Thank you.

Well, Lynette, can we go ahead and see if there's anyone on the phone-only lines that would like to speak? We're unmuting the lines, now.

I think somebody's running their washing machine while they're listening.

(Laughter)

MS. KOROSEC: All right. Okay, we have one caller who's trying to speak. Can you go ahead and open that line?

Okay, your line's open.

ANONYMOUS SPEAKER: Okay, can you hear me?

MS. KOROSEC: Yes, we can. Can you identify yourself, please?

ANONYMOUS SPEAKER: No, actually, I'm not -- are all the lines unmuted? I did not actually dial in to speak.

MS. KOROSEC: Oh, okay, I'm sorry. We unmute a line when we see that somebody's trying to talk. We assumed that you're trying to say something so --

ANONYMOUS SPEAKER: No, I haven't keyed in or anything so I haven't --

MS. KOROSEC: Okay. Well, thank you.

All right, so we don't have any phone callers on the line. We gave it our best shot.

So, that's it for our public comments, then.

COMMISSIONER MC ALLISTER: So, I believe that's it. So, wrap-up comments from us, I think we'll be short and sweet.

Everybody -- we've thinned out a little bit, but the attendance to the bitter end here is pretty impressive, still.

I really enjoyed today. I think I'm really happy to at least get out of Sacramento, even if we're in another major metropolis. But I really appreciate

the folks who drove from their perspective homes to be with us and express their opinions today, and their viewpoints. It's all really valuable.

I also want to thank the various representatives of our agencies, a few of them have had to go back to their homes and get ready for their next day, but certainly, Chair Weisenmiller, appreciate him co-leading this, together with me.

And the ISO, Phil, really appreciate you and all of your work. I mean, obviously, a lot of ISO staff time, and effort, and knowledge went into creating the agenda today and populating it.

And, also, Commissioner Florio thanks for sticking it out to the very end here.

And I know we're all -- we all have amazingly large demands on our time and carving out a day is a big commitment, but it also was -- obviously, for a topic like this, it's absolutely essential.

So, if Commissioner Weisenmiller has some comments?

CHAIRPERSON WEISENMILLER: Yeah, again, I'd so like to thank people for their participation.

I'd also like to thank our IEPR staff, Suzanne, Lynette, you know, for basically tirelessly organizing us and this event.

And, you know, and again certainly encourage people to file written comments. But again, thanks for your participation today.

And again want to thank the staffs of the various agencies who have participated today.

COMMISSIONER MC ALLISTER: I was certainly remiss. A lot of effort went into this, including over this last weekend getting ready to get down here with all the stuff, and making sure everybody submitted their presentations, and running herd on everything.

So, it's really quite impressive. So, thanks for the IEPR staff.

CHAIRPERSON WEISENMILLER: All right, so the meeting's adjourned.

COMMISSIONER MC ALLISTER: We're adjourned.

(Thereupon, the Workshop was adjourned at 5:24 p.m.)

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